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## **The role of amphibious warfare in British defence policy, 1945-1964.**

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**The Role of Amphibious Warfare in British  
Defence Policy, 1945 to 1964.**

**Ian Andrew Speller**

**Thesis submitted for the degree of Ph.D.**

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## **ABSTRACT**

### **The Role of Amphibious Warfare in British Defence Policy, 1945-1964**

**Ian Andrew Speller**

This thesis examines the factors that determined the role of amphibious warfare in British defence policy between 1945 and 1964. In particular, it concentrates on the attitude of the Royal Navy towards amphibious capabilities and on the position of the Royal Marines. The thesis establishes how the Navy's wartime experience influenced its view of post war amphibious requirements and the effect that this had on the higher direction of policy. It analyses how changing strategic reality affected Service attitudes towards amphibious warfare. In addition the thesis details the amphibious policy in effect during this period and examines the provision of men, material and equipment for amphibious warfare and the employment of amphibious forces.

In the decade following the 1945 the theory and practice of amphibious warfare in Britain was based on the wartime experience of raiding and of large scale assault operations on the model of the Normandy landings. Ambitious plans were made for a large peacetime amphibious training organisation with a nucleus assault fleet. However, the requirement to restrict defence expenditure caused these plans to be abandoned in the late 1940s.

During the 1950s changing defence priorities transformed approaches to amphibious warfare. With less emphasis placed on major war in Europe the requirement to prepare for large scale assault operations was abandoned in favour of the provision of small forces readily available for operations in cold and limited war. For the first time the Royal Marines were given primary responsibility for amphibious warfare. The Admiralty developed a strategy for overseas intervention based on amphibious seapower supported by aircraft carriers. This brought it into conflict with the RAF who had developed their own strategy of intervention. The resulting dispute reflected the desire of the three Services to maintain their own core capabilities while meeting the requirements of national strategy.

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## INTRODUCTION

An amphibious operation is a landing or embarkation involving the integration of sea and land forces.<sup>1</sup> Amphibious warfare has historically played an important part in British strategy. For reasons of geography strength at sea has always been vital to British security and military expeditions from Britain have always been required to cross the sea. Historically weak on land, England, and from 1707 Britain, was frequently able to concentrate enough maritime power to strike a blow against its enemies at some point away from their main forces, where a limited military commitment could achieve the greatest result. “*Conjunct expeditions*” as they were known in the eighteenth century were frequently employed as raids designed to inflict loss in men, ships and stores upon the enemy. Drake’s raid on Cadiz in 1587, the burning of eighty French sail at St. Malo in 1758, and the landings at Copenhagen in 1807 and Walcheren in 1809 are examples of this type of operation, striking at the maritime power of the enemy. Amphibious raids could also be employed as diversions to support an ally hard pressed on the Continent. The aborted landing at Rochefort in 1757 provides an example of this. The mere threat of such landings could force an enemy to divert men and resources to coastal defence. That amphibious force could achieve more permanent results was demonstrated by the capture of Gibraltar in 1704, of Quebec in 1759, and of Cape Town in 1795. Although more frequently used for raids and diversions, amphibious power could be exploited to seize and hold important bases and to establish and support colonies. Enemy colonies seized by amphibious forces were valuable bargaining counters in peace negotiations, helping to counter the continental gains of Britain’s European rivals. Amphibious warfare was an offensive tool of seapower which could be used either to further the war at sea by attacking enemy shipping and seizing bases, or to support or initiate a land campaign. The 1801 landing at Aboukir Bay which resulted in the expulsion of the French from Egypt is an example of the latter.

The deployment of amphibious power developed from the freebooting activities of Elizabethan sailors such as Drake, Raleigh, and Hawkins in the late sixteenth century, to the successful campaigns in India, America, and the West Indies during the Seven Years War and the model landing at

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<sup>1</sup>. Definition taken from DEFE 2/1760, **Amphibious Warfare Handbook No.4**

Aboukir Bay in 1801. Amphibious landings, conducted at the junction between naval and military spheres of responsibility, were difficult operations and resulted in a number of fiascos. Two notable failures were the 1702 expedition to Cadiz, and the 1809 landing at Walcheren. Success in amphibious operations depended on careful planning and close co-operation between naval and military commanders. The strict requirement of the naval commander to maintain the integrity of his fleet against enemy squadrons and the threat of bad weather often conflicted with the need to keep in close contact with the landing force. Failures at Rochefort in 1757, St.Cast Bay in 1758, and Cadiz in 1800 were largely attributable to the threat of late summer weather and the inability of the navy to guarantee orderly landing or safe re-embarkation.

In the mid-nineteenth century the adoption of steam propulsion gave added potential to the strategic deployment of amphibious power. Steamships provided a mobility and a versatility denied to ships dependent on sail. They could keep station in adverse weather and maintain passage even if becalmed. It was now possible to maintain a large force on a hostile shore without the same threat posed to sea communications by adverse weather conditions that had dogged earlier operations. Steam propulsion enabled the Franco-British fleet to land a force of 50,000 men in the Crimean peninsula in 1854, and it ensured their supply and reinforcement up to a quarter of a million men. In the past amphibious forces had had only a limited ability to meet strong enemy forces. Previous operations had concentrated on attacking weakly held colonies or on raids where withdrawal was intended before the arrival of enemy reinforcements. In exploiting the advantages of steam propulsion during the Crimean War the allies maintained their armies despite a supply line that was effectively 3,000 miles long. In doing so they were able to defeat a more numerous enemy army in a year long battle of attrition.<sup>2</sup> The utility of maritime forces in exploiting riverine communications was demonstrated during the American Civil War.<sup>3</sup> The adoption of steampower in many ways countered the added mobility given to land forces by the construction of railways. Although railways

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<sup>2</sup> R.Gardiner, **Steam, Steel, and Shellfire. The Steam Warship 1815-1905**, (London: Conway Maritime Press, 1992) Introduction and chapters 1 + 2. Andrew Lambert, **The Crimean War. British Grand Strategy, 1853-1856**, (Manchester: Manchester University Press, 1990) *passim*.

<sup>3</sup> William M.Fowler, **Under Two Flags. The American Navy in the Civil War**, (New York: W.W.Norton + Co., 1990) *passim*. Peter J.Parish, **The American Civil War**, (New York: Holmes and Meier Publishers, Inc., 1975) Chapter 14.

provided for the first time a quick and efficient means of land transport, giving continental armies the ability to challenge the mobility of seapower, ships remained the most satisfactory means of transporting large forces over any great distance.

Naval power provided the basis of British security throughout the nineteenth century. Between 1815 and 1906 Britain's deterrent was based on a maritime threat built on the battlefleet and reinforced by the proven capacity for extensive naval and maritime power projection operations. Although forced to meet an occasional naval challenge, such as that posed by the French between 1852 and 1865, the British battlefleet generally lacked a serious rival. In these conditions the Royal Navy was able to concentrate on developing the equipment and skills required to exploit maritime power to the full. The Navy developed a powerful coastal capability which made it possible for it to destroy enemy fleets inside their fortified harbours, thus perfecting command of the sea. Amphibious forces were an integral part of this capability, whose efficacy was proven in operations in the Baltic during the Crimean War.<sup>4</sup> This capability exerted a considerable deterrent effect on all the major powers of the era. Even the Germans developed a "*Copenhagen complex*".<sup>5</sup> The Royal Navy provided the war-fighting and deterrent strength which sustained Britain's position in the world. It protected Britain and the Empire from direct enemy action and deterred such action by threatening to destroy the fleet and bases of any opponent, to cut their maritime trade and destroy their finances while denying them the ability to do anything in response.<sup>6</sup>

Despite the experience gained by the British in amphibious operations during the seventeenth, eighteenth, and nineteenth centuries the subject received relatively little attention from naval historians. The two most influential nineteenth century writers on naval strategy, Phillip Colomb and Alfred Thayer Mahan, both stressed the over-riding importance of securing command of the sea. Mahan considered that as the enemy's fleet was the controlling factor in a campaign its destruction was the true objective of naval warfare, the best way to secure ulterior objectives

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4. Lambert, *The Crimean War*, passim.

5. Andrew Lambert, "The Royal Navy, 1856-1914: Deterrence and the Strategy of World Power", in Keith Neilson and Elizabeth Errington, *Navies and Global Defence: Theories and Strategy*, (Westport, Connecticut: Praeger, 1995) p.86.

6. Ibid p.69-92.

being the destruction of the force that threatened them. Mahan emphasised the role of decisive battles in naval warfare. In his most famous work, *The Influence of Sea Power Upon History 1660-1783*, published in 1890, Mahan emphasised that it was by judicious use of seapower that Britain was able to expand trade, seize colonies and thwart the plans of her enemies. He never discussed the role that amphibious warfare played in Britain's success. To Mahan, Hanava was taken in 1762 by the use of seapower and not specifically by amphibious forces.<sup>7</sup> This fostered the erroneous view that successful amphibious operations were an inevitable by-product of securing command of the sea, and not necessarily an end in themselves. Mahan was not interested in the numerous amphibious raids that were launched against the coast of France during the Seven Years War, explaining that, "*No particular mention will be made of these operations which had but little visible effect upon the general course of the war*".<sup>8</sup>

Mahan made little reference to the coastal warfare experience of the British in the nineteenth century. He favoured an American strategy of hemispheric defence which he supported with selected evidence taken from British history. His main interest was in providing the United States with a modern battlefleet able to secure command of the sea. Mahan's work had less relevance, but no less impact, in Britain than in his native America. At the turn of the century and during the First World War securing command of the sea was not a major problem for the Royal Navy, who still maintained a margin of superiority over their most likely rivals. The most pressing requirement was for an understanding of how to successfully exploit the command that already existed. In this respect Mahan's work was of limited value.

Like Mahan, Phillip Colomb tried to show the decisive importance of securing command of the sea. He asserted that "*The primary aim of naval war is the command of the sea*", and that "*....nothing can be done of consequence in naval war till one side secures control of the water area*". However, he was anxious to demonstrate the advantages that such command could bring. In *Naval Warfare* published in 1891, Colomb devoted over half of the book to the subject of attacks on territory from

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<sup>7</sup>. A.T.Mahan, *The Influence of Sea Power Upon History 1660-1783*, (Boston: Little Brown + Co., 1890) p.315.

<sup>8</sup>. Ibid. p.296.

the sea. He gives numerous examples of successful amphibious operations, claiming that

If the strength of the land defences is properly estimated, if sufficient troops are employed, landed clear of the fortifications of the enemy, and supplied and supported from the fleet, there appears to be, so far as we have yet come, no reason to doubt the fall of any place attacked, provided relief does not come to it over sea.<sup>9</sup>

Once the enemy's fleet was neutralised one could deploy the full offensive potential of seapower, implementing blockades, launching invasions and amphibious raids, or conducting naval bombardments. Nevertheless, the central message of Colomb's work was that securing command of the sea was the first and most important task in naval warfare.

Unfortunately, while interest in naval affairs grew in the final years of the nineteenth century, more attention was paid to the problems of securing command of the sea than what would be done with it once this had been achieved. It appears that the Navy accepted the Mahanite view that once command was secured all else would naturally follow. The offensive potential of amphibious warfare was neglected and remained firmly in the shadow of the new steam battlefleets. In 1897 the Commander-in-Chief of the army, Sir Garnet Wolseley, was moved to write:

We still have to convince the Navy that they can't win a war by themselves and that we are not trying to nab the money they ought to have but want to make our power what it must be to be effective - Amphibious.<sup>10</sup>

Amphibious operations were not entirely ignored. Writing at the turn of the century, Charles E. Callwell of the Royal Artillery became a recognised authority on the theory of small wars and of amphibious warfare. Callwell called for specialist training and equipment to prepare British forces for amphibious operations.<sup>11</sup> Of more significance was the

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<sup>9</sup>. Rear-Admiral P.H. Colomb, **Naval Warfare: Its Ruling Principles and Practice Historically Treated**, (London: Allen + Co., 1891) p.278.

<sup>10</sup>. DEFE 2/1900, **A Short Review of the History and Development of British Amphibious Warfare**.

<sup>11</sup>. C.E. Callwell, **The Effect of Maritime Command on Land Operations Since Waterloo**, (London: William Blackwell and Sons, 1897) also, C.E. Callwell, **Military Operations and Maritime Preponderance: Their Relations and Interdependence**, (London: William Blackwell and Sons, 1905). Callwell retired from active service in 1909. In 1914 he was recalled to the

work of the influential naval historian Sir Julian Corbett. Corbett viewed combined military and naval operations as the normal expression of the British method of waging war. He saw naval operations in the wider context of a maritime strategy combining all arms. He rejected the exclusive concentration on fleet encounters favoured by many supporters of a “*blue-water*” strategy. He fully appreciated the value of landings to seize territory or raids designed to disturb an enemy or help an ally. According to Corbett decisive results in warfare could only be achieved if seapower was used in conjunction with land power. In 1911 he wrote:

Since men live on land and not upon the sea, great issues between nations at war have always been decided - except in the rarest cases - either by what your army can do against your enemy's territory and national life, or else by fear of what the fleet makes it possible for your army to do.<sup>12</sup>

Corbett believed that Britain, its safety assured through command of the sea, had always been able to achieve success in a series of wars through the exploitation of a combination of blockade, economic support to allies, and the application of limited military power through amphibious warfare. By exploiting seapower Britain could gain the maximum benefit from limited military resources at a fraction of the cost of a major campaign on the Continent. He quoted Napoleon as saying:

With 30,000 men in transports at the Downs the English can paralyse 300,000 of my army, and that will reduce us to the rank of a second-class power.<sup>13</sup>

Corbett clearly appreciated the deterrent value of amphibious forces. That Britain's amphibious potential manifestly failed to reduce France to the rank of a second class power seems to have been ignored.

Amphibious projects gained much currency in the Navy prior to the First World War. An influential body within the Admiralty, headed by successive First Sea Lords Sir John Fisher and A.K.Wilson, believed that the British Army should be used in amphibious diversions near the heart

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active list, being appointed Director of Military Operations and Intelligence at the War Office. As such he was involved in the preparation of various plans for organisation of the Dardanelles campaign, an operation with which he was not in sympathy. **Dictionary of National Biography, 1922-1930.**

<sup>12</sup>. Julian Corbett, **Some Principles of Maritime Strategy**, (London: Longmans + Co., 1911) p.14.

<sup>13</sup>. Ibid. p.66.

of enemy power, or in the flank and rear of Germany's main forces.<sup>14</sup> Strongly influenced by Corbett, Fisher was an ardent believer in the "traditional" British strategy of using amphibious forces to exploit the mobility of seapower. One of his favourite quotations was that "*The British Army is a projectile to be fired by the Navy*".<sup>15</sup> The Army General Staff was not convinced. They believed that the Army should be committed to the decisive theatre where maximum pressure could be brought to bear against Germany. They were not interested in any amphibious schemes the Navy might develop.<sup>16</sup> Thus, when the Germans invaded Belgium and France in 1914 the British Army was sent to fight alongside the French. This initial commitment grew in 1915 with the decision to create a mass army and devote the majority of British manpower to the western front.

Despite Fisher and Wilson's interest in amphibious schemes, the Royal Navy remained heavily influenced by Mahan. It was a big ship navy whose resources were devoted to winning command of the sea by defeat of the enemy's capital ships. Little time or energy was devoted to subsidiary tasks such as coastal operations, anti-submarines warfare or amphibious warfare. The deterrent potential of amphibious and coastal forces was neglected. Fisher's reorganisation of the Navy in 1904 allowed the Admiralty to concentrate resources on the modern fleet by scrapping old, obsolete vessels which would be of little or no use for contesting control of the sea with enemy battleships and cruisers. At the same time it removed from the order of battle the sort of second line vessels suitable for undertaking vital work in support of coastal and amphibious operations.

The difficulties of amphibious landings were discussed at the Staff Colleges before 1914, while in 1904 a large force of 11,700 men, 2700 horses, 61 field guns and 315 vehicles had conducted a landing across the

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14. Arthur J.Marder, **From Dreadnought to Scapa Flow. The Royal Navy in the Fisher Era, 1904-1919. Volume 1**, (London: Oxford University Press, 1961) p.383-394. and **Volume 2**, p.176-191. Barry M.Gough, "Admiral Sir John Arbuthnot Fisher", and Nicholas A.Lambert, "Admiral Sir Arthur Knyvett Wilson", in Malcolm Murfett, **The First Sea Lords from Fisher to Mountbatten**, (Westport, Connecticut: Praeger, 1995).

15. Marder, **From Dreadnought to Scapa Flow, Volume 1**, p.385.

16. John Gooch, **The Plans of War. The General Staff and British Military Strategy 1900-1916**, (London: Routledge + Keegan Paul, 1974) chapter 9. Admiral Sir Herbert Richmond, "Amphibious Warfare in British History", in **Historical Association Pamphlet No.119**, 1941 p.27.



beach at Clacton.<sup>17</sup> At Prime Minister Balfour's insistence a sub-committee of the Committee of Imperial Defence was instituted in 1905, to decide on the practicality of various plans for combined military and naval action and for working out these plans in detail. Unfortunately Army opposition ensured that the sub-committee fell into abeyance after a few years and was only re-established in July 1914, at the suggestion of the Admiralty War Staff.<sup>18</sup> With the bulk of Britain's forces devoted to the Western Front, amphibious operations played only a small part in the course of the war. The only large scale landings, conducted during the Gallipoli campaign in 1915, resulted in bloody failure.

Following the First World War the military analyst Basil Liddell-Hart argued that there has historically been a distinct "*British way in warfare*" which had enabled the country to gain success in war with far fewer losses than were associated with "*Continental*" methods of waging war. Liddell-Hart developed and synthesised the ideas of Mahan and Corbett.<sup>19</sup> He argued that from the sixteenth century Britain had avoided costly military campaigns on the Continent and had achieved success by relying on a maritime strategy. In this way Britain had enriched itself and crippled its enemies by capturing their trade, seizing their colonies and blockading their ports. Continental military expeditions had only played a small role in British strategy. To Liddell-Hart, Britain's seapower enabled it to deploy limited military force where it was least expected and could be most effective. He viewed the major Continental commitment of British troops to France in the First World War as an aberration. The carnage and stalemate on the western front was a result of sending a conscript army to fight alongside the French instead of adopting a traditional "*British*" strategy relying on the offensive and defensive strength of amphibious seapower.<sup>20</sup>

Liddell-Hart's theory had an enduring appeal. Stephen Roskill portrayed the Allied victory over Germany in the Second World War as a victory for the "*British way in warfare*". According to Roskill:

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17. Major-General Sir George Aston, *Letters on Amphibious Wars*, (London: John Murray, 1920) p.117.

18. Marder, *From Dreadnought to Scapa Flow*, Volume 1, p.383.

19. David French, *The British Way in Warfare 1688-2000*, (London: Unwin Hyman, 1990). Brian Bond, *Liddell-Hart: A Study of His Military Thought*, (London: Cassell + Co., Ltd, 1977) chapter three.

20. B.H. Liddell-Hart, *The British Way in Warfare*, (London: Faber and Faber, 1932).

During the three centuries or so of our history as a world power it has several times happened that a far stronger continental coalition has pitted its might against Britain and her allies, has won a series of resounding victories on land only to find itself brought up against a method of waging war which its leaders could not grapple and of which they had no clear understanding. Yet, ultimately, our maritime strategy, founded on centuries of experience of the sea, brought our enemies to utter defeat.

He acknowledged that Britain only adopted a maritime strategy in 1940 once the Continental one had failed, and that the main attrition of German strength occurred on the eastern front. However, he considered that the offensive and defensive strength of seapower, including the ability to send valuable supplies to the Soviet Union, had played a decisive role in the war.<sup>21</sup>

Britain's security problems were not solved by victory in 1945. The balance of power in Europe was shattered. The Soviet Union occupied much of central and eastern Europe and possessed a huge army which Britain could not hope to match. The development of the atomic bomb threatened to further erode security which had already been undermined by the development of the bomber and the submarine. The Royal Navy alone could no longer protect Britain from defeat in a war against a powerful Continental adversary. Britain had to provide armies of occupation in Germany and Austria, and had to maintain garrisons in an empire now threatened by the growth of nationalism. In addition to this Britain was exhausted by six years of total war. Unable to maintain the balance of power in Europe without American help, the need to tie the United States firmly into the European security system became a central plank of British foreign policy. In February 1945, at the Yalta Conference, President Roosevelt had stated that United States forces would leave Europe within two years of the end of the war. In order to demonstrate European resolve and encourage American participation in Europe Britain concluded the Treaty of Dunkirk with France in 1947, and the Brussels Pact with France and the Benelux countries in 1948. This, plus increasingly belligerent action by the Soviet Union, convinced the United States of the need to become committed to the security of

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<sup>21</sup>. Stephen Roskill, *The War at Sea 1939-1945, Volume 1 Part 1*, (London: HMSO, 1961) p.1.

Europe, resulting in the establishment of the North Atlantic Treaty Organisation (NATO) in April 1949.

The original NATO agreement had not committed Britain to maintaining any troops in Europe. However, in 1954, following the debacle over the European Defence Community, Britain signed the Paris Agreement whereby it agreed to maintain four army divisions and a tactical air force in Germany. This was the first time in two hundred and fifty years that Britain had agreed to maintain major ground forces on the Continent of Europe in peacetime. The Continental commitment was not entirely without precedent. Throughout history Britain had resorted to security arrangements with allies on the Continent. Indeed, Britain was never able to entirely ignore developments in Europe and frequently deployed large military forces there to fight alongside allies. According to Michael Howard:

A commitment of support to a Continental ally in the nearest available theatre, on the largest scale that contemporary resources could afford, so far from being alien to traditional British strategy, was absolutely central to it. The flexibility provided by seapower certainly made possible other activities as well.....but these were ancillary to the great decisions on land and they continued to be so throughout two world wars.

Howard noted that when Britain did turn to a purely maritime strategy, as in 1940 or 1803, it was a result of *force majeure*, a strategy of survival rather than of victory.<sup>22</sup> Strength at sea offered strategic options and diplomatic choices that were not available to other powers, but Britain could never afford to ignore the Continental balance of power.

Post-war British foreign and defence policy was not entirely Eurocentric. In 1945 Britain still possessed a world-wide empire and even following the independence of India in 1947 there was no desire to relinquish this responsibility. When a growing tide of nationalist opinion in the colonies forced successive governments in the 1950s and 1960s to press the pace of decolonisation, a series of defence agreements and a more general feeling that Britain still had a world role caused the maintenance of

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<sup>22</sup>. Michael Howard, *The Causes of War and other essays*, (London: Temple Smith, 1983) p.180.

military commitments outside Europe.<sup>23</sup> Initially these commitments were met by a traditional defensive combination of static army garrisons and limited naval and air forces. During the 1950s it became clear that the future tenure of overseas bases was at best doubtful. This, and the shift to smaller, all regular armed forces announced in the 1957 Defence White Paper, brought a move to develop mobile intervention forces, able to deter aggression by exploiting the flexibility of seapower and airpower in bringing military force to bear. This was perceived by many to be a return to a more traditional strategy where Britain could exploit her strength at sea to maintain a world role.

The study of post-war amphibious warfare from 1945 to 1964 is particularly enlightening in this context. Amphibious capabilities were deployed both in support of the European commitment, and, later, as part of a maritime strategy of intervention in the Indian Ocean. Following the war amphibious warfare was viewed along the lines of the major European operations of 1943 and 1944. Unable to match Soviet land power, in the late 1940s both Britain and the United States planned to evacuate their occupation forces in Germany to the United Kingdom and the Mediterranean if attacked by the Soviets in Europe. Allied offensive strength would then be built up while their air forces conducted a major bombing campaign prior to a return to the Continent.<sup>24</sup> In essence this was a return to the strategy employed by Britain after 1940. A limited peacetime amphibious capability was maintained in order that Britain would not have to develop from scratch the equipment and techniques required to effect a return to the Continent following expulsion by a superior force. This was not a maritime role. As had been the case in World War Two, amphibious warfare was a tool by which Britain could deploy a major land force to Europe, not a small force to act as a diversion in support of an ally, but the largest land force Britain could afford to maintain. The Navy would be operating in support of the Army. The possibility of maintaining powerful amphibious forces as a deterrent to Soviet aggression did not receive serious consideration.

In the 1950s the development of the hydrogen bomb and the increasing availability of weapons of mass destruction placed in doubt the viability

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23. Phillip Darby, *British Defence Policy East of Suez, 1947-1968*, (London: Oxford University Press, 1973) *passim*.

24. Michael Dockrill, *British Defence Policy Since 1945*, (Oxford: Basil Blackwell Ltd, 1988) p.32.

of large scale amphibious assaults, and the whole idea of a conventional war in Europe. In the general review of strategy that followed priority shifted away from preparing for war in Europe towards a reliance on nuclear weapons to keep the peace on the Continent, and the development of mobile forces designed to meet limited war and cold war contingencies elsewhere. With the traditional role of defending the sea lanes in a major war now receiving only a low priority the Admiralty had to find new ways of justifying a large peacetime navy. In a major shift of policy the Royal Navy developed plans for a powerful intervention capability in the Indian Ocean. Amphibious warfare was central to this capability and in the early 1960s it became a major naval priority for the first time in peace. New amphibious shipping was built and the Navy based its case for a new generation of aircraft carriers on the need to support amphibious task forces east of Suez.

This thesis examines the position of amphibious warfare in British defence policy between 1945 and 1964, and in particular the relationship it had with the Royal Navy. It will start by establishing how the Navy's wartime experience influenced its view of post-war amphibious requirements. The possibility of amphibious forces being exploited as a traditional maritime counter to Soviet military strength will be discussed. It will show how changing defence priorities and strategic reality transformed approaches to amphibious warfare and the impact this had on the three Services. The changing roles and responsibilities of the Royal Marines will be examined. The development of amphibious material and the construction and conversion of specialist assault shipping will be discussed within the context of wider defence policy and priorities. In addition a comparison will be made between British developments in the field and advances being made in the United States. The thesis includes a study of the only major amphibious operation undertaken by Britain during this period, the assault on Port Said in 1956. By examining the operation from a specifically "*amphibious warfare*" angle it aims both to provide a new perspective on military operations at Port Said, and to illustrate the effect that post-war defence policy had on Britain's ability to intervene overseas. The last three chapters are devoted to an examination of the changing role of the Royal Navy in general, and the important part that amphibious warfare played in the new Navy that resulted. A key part of this examination will be a

study of the conflicting Navy and RAF plans for intervention east of Suez, and of the aircraft carrier controversy up to 1964.

The end date of 1964 was chosen for two main reasons. Firstly, on a practical level, the thirty years rule has meant that the primary sources required to carry this research further have not yet been made available for public viewing. More importantly, 1964 represents a logical finishing point for the thesis. By 1964 all the major decisions on the future of Britain's amphibious lift had been made. The commando carriers HMS *Bulwark* and *Albion* had been commissioned, two new assault ships were on order, and the first of six new logistic landing ships was approaching completion. In addition a decision had been made to build a new aircraft carrier in order to support the limited war role in the Indian Ocean. In July 1964 the influential Chief of Defence Staff, Lord Mountbatten, retired and earlier in the year, on 1 April, the Ministry of Defence was reorganised, giving the central office increased powers and reducing the independence of the three Services. In the same year the ruling Conservative administration was replaced by a Labour government under Harold Wilson. The Wilson administration was to be responsible for profound changes in Britain's foreign and defence policy. However, the shape and size of the Royal Navy's amphibious force had been set in the early 1960s and with the exception of the commando carriers which were paid off in the 1970s, they have been maintained at the same level into the 1990s. It is therefore logical to end this study of amphibious warfare when the change of administration occurred in October 1964.

The term "*amphibious warfare*" was not officially adopted by the Services in Britain until February 1951. Prior to that the official British term for this mode of warfare was "*combined operations*". In order to avoid confusion I use the term "*amphibious warfare*" throughout the thesis except when referring to a specific post or organisation prior to 1951, when quoting directly from another source, or when use of the term "*combined operations*" is clearly more appropriate. The Combined Operations Organisation, established in 1940 to promote the study and practice of amphibious operations, was frequently referred to simply as "*Combined Operations*", likewise the renamed Amphibious Warfare Organisation was often called "*Amphibious Warfare*". Where the terms

are used with capitals the official organisation is being referred to, when lower case is used then the reference is to the mode of warfare.

For ease of reference standard United States nomenclature has been used for landing ships and craft. This system was not adopted in Britain until 1942. Prior to that Landing Craft Tank were known as Tank Landing Craft; Landing Craft, Mechanised were known as Mechanised Landing Craft; and Landing Craft, Assault were known as Assault Landing Craft. Within the Mediterranean theatre they were known as A Lighters, B Lighters, and C Lighters respectively. A comprehensive list of all amphibious warfare ship and craft designations is given at Appendix One. A list of all abbreviations is given at Appendix Two, and a list of the key military and political figures relevant to this thesis is at Appendix Three.

## CHAPTER ONE

### AMPHIBIOUS RENAISSANCE

Amphibious operations did not play a large part in the Allied victory in the First World War. They were to be central to victory in the Second. The first amphibious operation in the earlier conflict, the landing of British and Indian troops at Tanga in German East Africa in November 1914, was a hopeless fiasco completely failing to secure the town.<sup>1</sup> The only major amphibious operation of the war, the assault on the Gallipoli peninsula in 1915, failed to break through the Turkish defences and became stalemated close to the shore. Only with the Zeebrugge raid of April 1918 did amphibious operations achieve a measure of success, although even that operation largely failed in its aim to close the use of the port to enemy submarines.<sup>2</sup> In the Second World War Britain and the United States developed a strong amphibious capability which they employed successfully in Europe and the Pacific. New ships and craft were produced and techniques were developed which allowed assaulting forces to overcome even the most entrenched opposition. By 1945 amphibious warfare had provided the western Allies with a major strategic weapon, offering the ability to land a modern army on an enemy coastline and to support it in an offensive Continental campaign.

The First World War demonstrated that amphibious techniques had not kept pace with the increasing defensive power of infantry weapons. Machine guns, rifles and rapid fire artillery meant that entrenched opposition would have to be effectively suppressed before assaulting troops could hope to establish themselves ashore. Prior to the Second World War the equipment to do this did not exist. The landings at Cape Helles in April 1915 were supported by the fire of the fleet, including the modern battleship HMS *Queen Elizabeth*.. However, close range low-trajectory fire from the battleships failed to dislodge the defenders. Flat trajectories meant that shells fell short or skimmed over the skyline. The technical equipment available was not

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<sup>1</sup>. Sir Julian Corbett, *Naval Operations - Volume 1*, (London: Longmans, Green and Co., 1920) p.374

<sup>2</sup>. Admiral of the Fleet Lord Keyes, *Amphibious Warfare and Combined Operations*, (London: Cambridge University Press, 1943) p.54-55.



good enough to allow warships to lay miles offshore and lob shells at the enemy without the risk of hitting their own troops. The ships were hampered by a lack of suitable fire support equipment, fuses and explosives. Lying in their entrenchments the Turks emerged to bring their machine guns into action as soon as the naval fire was withheld to allow the assault to go forward. To counter such defences shallow draught close support craft capable of putting down devastating fire on the shore line were required. In 1915 no such craft existed.<sup>3</sup>

An additional problem was the lack of modern landing craft. Troops landing in 1915 were put ashore in cutters and whalers in much the same way as Redcoats had been two centuries earlier. Towed inshore by steam pickets and other small craft these boats had to be rowed the last few hundred yards, providing a slow and vulnerable target for the defenders. One ship, the collier *River Clyde*, was converted into a landing ship. Sally ports were cut into its sides and gangways fitted. Carrying 2,000 men and towing a steam hopper and lighters the plan was to run the ship aground, the hopper and lighters acting as a bridge to the shore. The troops were supposed to issue out of the sally ports, down the gangways, over the improvised bridge and stream ashore in minutes. In practice they were gunned down by the unsuppressed defenders as they debarked, few reached the shore.<sup>4</sup> A number of specialist landing craft were employed in the landing at Suvla Bay in August 1915. These large flat bottomed craft could each carry 500 men and proceed under their own power to the shore. Drawing little water forward and seven feet aft, troops could be landed dry shod on a steep beach by means of a long ramp. Although primitive in comparison to the sophisticated modern craft employed thirty years later, these vessels represented a significant improvement on warships cutters.<sup>5</sup> The landings at Suvla Bay were unopposed so the craft were not tested under fire.

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<sup>3</sup>. Admiral T.H. Binney, "Gallipoli and Normandy", in *RUSI Journal*, 1945.

<sup>4</sup>. Brian Friend, "Landing Craft Through the Ages - Part Two", in *Warship*, Volume 46, April 1988, p.32-47. C.F.Aspinall-Oglander, *Military Operations - Gallipoli, Volume 1*, (London: William Heineman Ltd, 1929) p.234.

<sup>5</sup>. Brian Friend "Landing Craft Through the Ages - Part 2" p.32-33. Sir Roger Keyes, *The Naval Memoirs of Admiral of the Fleet Sir Roger Keyes. The Narrow Seas to the Dardanelles, 1910-1915*, (London: Thornton Butterworth Ltd, 1934) p.380.

Attitudes towards amphibious warfare in the inter-war period were heavily influenced by the failure of the Gallipoli campaign. It was taken by many to show that amphibious landings against defended beaches were at best diversionary sideshows and at worst suicidal folly.<sup>6</sup> As late as 1943 Roger Keyes, Chief of Staff to the three successive Naval Commanders-in-Chief at the Dardanelles, wrote that daylight assaults against a defended shore were not feasible.<sup>7</sup> In the inter-war period naval policy and operational doctrine was dominated by the requirements of the decisive fleet action. Staff College discussions were centred largely on re-fighting Jutland and the problems of major encounters with the Imperial Japanese Navy. The primary concerns of the Admiralty were the maintenance of an effective battlefleet and the struggle for control of the Fleet Air Arm. Budgetary pressure meant that the Navy had to concentrate on maintaining the core capability, the ability to control the sea, at the expense of the ability to exploit that control once it was achieved.<sup>8</sup>

Amphibious warfare was not entirely ignored prior to 1939. The report of the Madden Committee in August 1924 recommended that the Royal Marines should provide lightly armed amphibious striking forces capable of seizing forward bases and of raids along an enemy coast. The Admiralty concluded that there were insufficient funds to allow for the creation of such a force but the idea itself was not rejected and the concept of striking forces was included in the 1927 *Instructions for Royal Marine Divisions*. In the 1930s the threat of war with Italy during the Abyssinian crisis highlighted the vulnerability of Britain's bases in the Mediterranean. An inter-Service force was sent to defend the base at Alexandria and after the crisis had subsided a nucleus of Marines was maintained as the Mobile Naval Base Defence Organisation (MNBDO). The MNBDO went some way towards providing for the defence of forward bases.

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<sup>6</sup>. David MacGregor, "The Use, Misuse, and Non-Use of History: The Royal Navy and the Operational Lessons of the First World War", in *The Journal of Military History*, Volume 56, October 1992, p.606-607.

<sup>7</sup>. Keyes, *Amphibious Warfare*, passim.

<sup>8</sup>. Stephen Roskill, *Naval Policy Between the Wars - Volume 1*, (London: Collins, 1968) and *Volume 2*, (London: Collins, 1976); also Arthur J.Marder, *From the Dardanelles to Oran - studies of the Royal Navy in War and Peace*, (London: Oxford University Press, 1974).

Unfortunately, its functions did not extend to the seizure of such bases and it contained no amphibious warfare elements.<sup>9</sup>

Following the First World War staff college discussions and exercises were incorporated in an updated version of the pre-war *Manual of Combined Naval and Military Operations*. At the suggestion of the War Office a committee was set up to complete a draft chapter on combined operations based on a report of the 1919 staff college exercises. The inter-departmental Committee on Combined Operations first met in June 1920 and published its revised chapter in 1922. An official *Manual of Combined Operations* was published in 1925 and revised in 1931 and 1938. The Manual was not widely distributed throughout the Services but did provide a useful starting point for the study of combined operations. The study of amphibious warfare was not entirely of a theoretical nature. Joint exercises and military exercises were conducted in Home waters, the Mediterranean, and off the coast of India, although these tended to be limited in scope and the result of ad hoc local arrangements. Amphibious training was neither vigorous nor general throughout the Army.<sup>10</sup>

The Admiralty was aware from experience in the Dardanelles campaign that it needed to improve the accuracy of naval bombardment. Offshore bombardment was practised at a number of bombardment ranges, including the range at Cape Wrath. Firing practice was conducted with the fall of shot corrected by forward observation posts and by aircraft of the Fleet Air Arm. A Bombardment Manual was produced and issued to the three Services. According to Admiral Sir Frederick Dreyer, this preparation paid good dividends in the Second World War, laying the foundations for the successful application of naval firepower against shore targets.<sup>11</sup> As Vice-Admiral commanding the Battle Cruiser Squadron in 1928,

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<sup>9</sup>. Donald F.Bittner, "Britannia's Sheathed Sword: The Royal Marines and Amphibious Warfare in the Inter-War Years - A Passive Response", in *The Journal of Military History*, Volume 55, July 1991, p.345-364.

<sup>10</sup>. Rear-Admiral L.E.H.Maund, *Assault from the Sea*, (London: Methuen, 1949) p.3-4. Kenneth J.Clifford, *Amphibious Warfare Development in Britain and America from 1920-1940*, (New York: Edgewood Inc., 1983) p.31-41. Bernard Fergusson, *Watery Maze - The Story of Combined Operations*, (London: Collins, 1961) p.36. Fergusson served as a Director in COHQ under Robert Laycock. In preparing this book he was given complete access to the files of COHQ.

<sup>11</sup>. Admiral Sir Frederick Dreyer, *The Sea Heritage. A Study of Maritime Warfare*, (London: Museum Press Ltd, 1955) p.263.

Dreyer had participated in a combined naval and military landing operation carried out in the Moray Firth. Troops from the 2nd Battalion, Queens Own Cameron Highlanders were landed from the battlecruisers HMS *Hood*, *Renown* and *Repulse* and from four accompanying destroyers. Naval artillery support was provided by the warships in accordance with a pre-arranged plan.<sup>12</sup>

One clear lesson highlighted by combined exercises was the need for specialist landing craft.<sup>13</sup> In the 1920s an inter-Service Landing Craft Committee was established to study the design and number of craft required to conduct a landing on a hostile shore.<sup>14</sup> Their first attempt at a landing craft was the Motor Landing Craft (MLC(1)) completed in 1926. This craft was not a success and was followed in 1928 by the MLC(10). Like the earlier unsuccessful design, MLC(10) was a flat bottomed craft powered by a water jet. It could embark 100 men or a twelve ton tank and discharged them onto the beach over a steep bow ramp. The water jet gave the MLC a low speed of around five knots and the blunt bow and shallow draught made it somewhat unseaworthy. Reportedly the craft was faster if driven backwards. By 1930 the Royal Navy had received three MLC. Six more were ordered as a result of the Abyssinian crisis although these were not delivered until the winter of 1938.<sup>15</sup>

It was not until the establishment of an Inter-Service Training and Development Centre in 1939 that amphibious operations were subject to constant and detailed study. Following pressure from the War Office the Chiefs of Staff (COS) agreed to set up an inter-Service committee to study and make recommendations on the problems associated with inter-Service operations. It was also to keep under review the existing *Manual on Combined Operations*. The new committee, a sub-committee of the Deputy Chiefs of Staff Committee, was known as the Inter-Services Training Sub-Committee (DCOS(IT)) and consisted of the Assistant Chief of the Naval Staff, the Assistant Chief of the Air Staff, and the Director Military Operations and Intelligence. As a result of recommendations originating from the

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12. ADM 203/89, **Combined Naval and Military Landing Operations**.

13. ADM 203/74, **Combined Exercise, Kasid Beach 1925**.

14. ADM 203/73, **Requirements for Landing Craft**.

15. Friend, "Landing Craft Through the Ages - Part 2" p.39-41.

Royal Navy staff college at Greenwich the committee was instructed to consider the question of establishing a training and development centre for the study and development of the materials and techniques required for inter-Service operations. DCOS(IT) first met in March 1938. Final recommendations for the establishment of a training and development centre to be based at the Royal Marine establishment at Eastney (Portsmouth) were submitted to the COS in July 1938. The COS approved the report and consequently the Inter-Service Training and Development Centre (ISTDC) was established alongside the MNBDO at Fort Cumberland, Eastney. The centre had a naval commandant and an Army and RAF representative.<sup>16</sup>

The ISTDC was to study the development of material, technique and tactics for all inter-Service operations and did not confine itself to opposed landings although amphibious operations played a large part in the work of the ISTDC from the outset. Not until September 1940, when it was under the Directorate of Combined Operations, did the ISTDC become concerned solely with amphibious operations. The centre studied practical and theoretical problems associated with amphibious operations. A broad theory for assault across the sea was established and ships were earmarked for conversion to fast amphibious transports. The Centre secured £30,000 for the construction of prototype landing craft, and further funding was found by halting construction of a number of improved "X" lighters designed in 1937 on the lines of the craft used in the 1915 Suvla Bay landing.<sup>17</sup> Amphibious warfare was not yet universally recognised as an important part of British defence policy. The ISTDC was temporarily disbanded at the time of the Munich crisis and was again disbanded on the outbreak of war in September 1939. The naval and RAF members returned to their respective Services although the Army member, Major Macleod, remained at Fort Cumberland. The decision to disband the ISTDC was myopic. It appears all the stranger as at that time the Joint Planners were investigating plans for the

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<sup>16</sup>. Clifford, *Amphibious Warfare*, p.65-72. DEFE 2/782A, *Early History and Events, ISTDC and DCO*, p.1-2. *History of the Combined Operations Organisation 1940-1945*, (London: Amphibious Warfare Headquarters, 1956) p.9-10. This book is the post war staff history of Combined Operations. A copy is held at the Public Records Office, file number DEFE 2/1773 and also at the Ministry of Defence Naval Historical Branch.

<sup>17</sup>. DEFE 2/1790, *History and Development of the Experimental Section in COHQ*, p.2. Fergusson, *Watery Maze*, p.40-43.

capture of the Italian Dodecanese islands by amphibious assault. The decision was so clearly misguided that in November the ISTDC was reformed.<sup>18</sup>

Following the fall of France in 1940 the first practical step towards the adoption of an offensive amphibious strategy was the appointment by the COS in June 1940 of the Adjutant-General, Royal Marines, Lieutenant-General Bourne, to head a Directorate of Combined Operations. Bourne was appointed Commander of Raiding Operations on coasts in enemy occupation and Adviser to the COS on combined operations. According to the directive issued to General Bourne, dated 17 June 1940, the object of raiding operations; *“will be to harass the enemy and cause him to disperse his forces, and to create material damage, particularly on the coast line from Northern Norway to the western limit of German occupied France”*. Bourne was given discretion in the choice of objectives and the scale of operations, subject to available resources and to the direction of the COS. The six independent companies raised by the War Office for guerrilla operations in Norway plus the new irregular Commandos then being formed were placed under his operational command for raiding. He was also to receive a number of parachutists, although these in fact never came under his command.<sup>19</sup>

In his capacity as Adviser on Combined Operations (ACO), Bourne took command of the ISTDC and was to report to the COS on the organisation required for opposed landings. He was responsible for supervising the technical training of all troops earmarked for combined operations and for the development and production of special craft and equipment. He was not, however, given authority for the planning or conduct of combined operations beyond the level of raids. That task would fall to the Service departments and their designated commander. ACO was to maintain close links with the Joint Planning Staff (JPS) who were required to consult Bourne whenever they received a combined operation project to examine

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<sup>18</sup>. Fergusson, *Watery Maze*, p.43. Maund, *Assault from the Sea*, p.16-21. Also see DEFE 2/783, DEFE 2/784, and DEFE 2/178.

<sup>19</sup>. *History of the Combined Operations Organisation*, p.12.

which implied a landing on a hostile shore. He had direct access to the COS Committee.<sup>20</sup>

Due to a lack of landing craft and equipment the Directorate was mainly concerned with drawing up requirements for landing craft and obtaining ships in order to modify them for landing operations.<sup>21</sup> After a couple of minor pin-prick raids Churchill replaced Bourne and appointed Admiral of the Fleet Sir Roger Keyes as Director of Combined Operations (DCO) on 17 July. 1940. Bourne had been appointed by the COS without reference to Churchill. The Prime Minister considered that the post warranted an officer with more authority who would be able to stand up to the Chiefs.<sup>22</sup>

Keyes, veteran of Gallipoli and hero of the 1918 Zeebrugge raid, seemed an obvious choice for the post. Throughout his life he had shown a dash and offensive spirit that lent itself well to the concept of raiding operations. He had first hand experience of combined operations and was a popular public figure. However, the appointment was unpopular with the COS. First Sea Lord (1SL) Dudley Pound told Admiral Andrew Cunningham, "*Roger Keyes intrigued himself into the position of Director of Combined Operations in spite of the protests of the Chiefs of Staff*".<sup>23</sup> Pound had been Keyes's subordinate on a number of occasions, most recently in the 1920s when Keyes was Commander-in-Chief Mediterranean. As Member of Parliament for Portsmouth North Keyes had been an outspoken critic of the Admiralty's conduct of the war. He was a man more noted for his fighting spirit than for his tact or intellect.<sup>24</sup> As head of an organisation which by its very nature trespassed into territory which both the Army and Navy regarded as their own this was to cause difficulties.

One of Keyes's first steps as DCO was to move his headquarters out of the Admiralty and to set up Combined Operations Headquarters (COHQ) in a separate building in Richmond Terrace, Whitehall.

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<sup>20</sup>. COS (40) 468, **Directive to General Bourne**, 17 June 1940; CAB 80/13.

<sup>21</sup>. DEFE 2/782A , p.19.

<sup>22</sup>. Fergusson, **Watery Maze**, p.51.

<sup>23</sup>. Phillip Ziegler, **Mountbatten. The Official Biography**, (London: Collins, 1985) p.154.

<sup>24</sup>. Cecil Aspinall-Oglander, **Roger Keyes. The Biography of the Admiral of the Fleet Lord Keyes of Zeebrugge and Dover**, (London: The Hogarth Press, 1951) *passim*.

Opinion is divided on the merits of this move. Rear-Admiral Maund considered that it was regrettable as it led to a physical and psychological separation from the Admiralty.<sup>25</sup> On the other hand this was precisely Keyes's intent. COHQ was an independent organisation and amphibious warfare was an inter-Service matter. It is difficult to see how COHQ could have flourished as an independent inter-Service organisation if it remained physically and psychologically bound to the Navy. As Commodore Submarines between 1913 and 1915 Keyes had acted very much as a free agent, to the point of blatantly disregarding orders.<sup>26</sup> The Admiralty had good reason to be suspicious that Keyes would try to establish his own private navy. The move of COHQ to new premises did nothing to alleviate such fears.

Keyes had an expansive view of what his position as DCO entailed. He had not been issued with a new directive on taking up his appointment and this was to lead to some confusion. Keyes took the title of DCO to mean just that. He saw himself as solely responsible to the Minister of Defence on combined operations matters. The COS on the other hand considered DCO to be responsible to them on all matters except minor raids. Keyes was obstinate and arrogant in his dealings with the COS and frequently tried to circumvent their opposition by direct appeals to Churchill. He was constantly agitating for offensive action and felt that he was being thwarted by craven Whitehall committees and bombarded Churchill with notes to this effect. During the winter of 1940/1941 he devised a scheme for the capture of the Mediterranean island of Pantelleria. The COS had severe reservations about this operation and the scheme was eventually abandoned, much to the indignation of the DCO.<sup>27</sup>

Under a new directive issued in March 1941 the position of DCO was somewhat clarified. The DCO retained his responsibilities for training and development of technique and equipment and his advisory functions. As regards the conduct of operations, he was responsible, under the general direction of the Minister of Defence and the COS,

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<sup>25</sup>. Maund, *Assault from the Sea*, p.74.

<sup>26</sup>. Aspinall-Oglander, *Roger Keyes*, p.99-101.

<sup>27</sup>. Ibid, p.400. Ziegler, *Mountbatten*, p.154-155. Fergusson, *Watery Maze*, p.74-75.



for the initiation, planning and execution of operations by Special Service troops, reinforced where necessary by small forces not normally under his command. For larger operations he was merely to consult and advise.<sup>28</sup> The new directive did not bring an end to the differences and misunderstandings between DCO and the Service Ministries. Keyes was reluctant to surrender any authority and his conception of his position remained as it had been before.

Matters came to a head in autumn 1941 when the Vice Chiefs of Staff recommended a change in the functions of DCO. Their proposal represented an attempt to further limit the authority of COHQ, with DCO downgraded to the position of Adviser on Combined Operations. Keyes objected and launched a personal appeal to the Prime Minister. Churchill backed the COS and Keyes, who was unable to accept this, was relieved of his appointment on 4 October to be replaced by the young Lord Mountbatten. Without blaming his successor, Keyes remained bitter. He reputedly told Mountbatten, "*Dickie, the trouble is that the British have lost the will to fight.....The Chiefs of Staff are the greatest cowards I have ever met*".<sup>29</sup> Dudley Pound on the other hand was pleased to be rid of his former boss, writing "*He never had much brain and what he has got left is quite addled*".<sup>30</sup>

Captain Louis Mountbatten was in the United States waiting to take command of the aircraft carrier HMS *Illustrious* when he was ordered back to Britain. Mountbatten took up his new post on 27 October 1941.<sup>31</sup> Under a new directive dated 17 October, Mountbatten was appointed Adviser on Combined Operations (ACO). Under the general direction of the COS he was to:

Act as technical adviser on all aspects of, and at all stages in, the planning and training for combined operations.

Be responsible for co-ordinating the general training policy for Combined Operations for the three Services. You will command the Combined Training Centres and Schools of Instruction.

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<sup>28</sup>. COS (41) 166, 14 March 1941; CAB 80/26.

<sup>29</sup>. John Terraine, **The Life and Times of Lord Mountbatten**, (London: Hutchinson and Co.Ltd, 1968) p.84.

<sup>30</sup>. Ziegler, **Mountbatten**, p.154-155.

<sup>31</sup>. Terraine, **Life and Times**, p.83.

Study tactical and technical developments in all forms of combined operations varying from small raids to a full scale invasion of the Continent.  
Direct and press forward research and development in all forms of technical equipment and special craft peculiar to combined operations.

Only in “*raids on a very small scale which are carried out by Special Service troops only*” was Mountbatten to appoint the force commander and be responsible for detailed planning. His executive powers were restricted to the training of amphibious forces and the mounting of small raids. The position of ACO in relation to the COS and to force commanders was clearly established.<sup>32</sup>

Keyes left a legacy of bitterness behind him. The COS viewed COHQ with distrust; accepting its existence only in a subordinate role with limited powers and ambitions. There was a lingering belief that Combined Operations was unnecessary, untidy and irregular. Mountbatten, now advanced to the rank of Commodore, was a relatively junior officer replacing an elderly Admiral of the Fleet. His appointment had been on the initiative of Churchill rather than the COS. The Chiefs were sceptical but did not openly oppose the appointment. Pound in particular had serious reservations and was keen to ensure that the ACO did not trespass into what was properly the preserve of the Royal Navy.<sup>33</sup>

On 9 December Mountbatten was issued with a revised directive which acknowledged the dual nature of his responsibilities. He was to retain the title of ACO when acting in his advisory role. When exercising his executive function he was to use the title Commodore Combined Operations. These executive functions included the command of all Combined Operations establishments and Special Service troops in the British Isles. They also encompassed the command of all the specialist assault ships and craft in Britain, except those placed under the command of a force commander for a specific operation.<sup>34</sup> It was as Commodore Combined Operations that Mountbatten was responsible

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<sup>32</sup>. COS (41) 629, 17 October 1941; CAB 80/31.

<sup>33</sup>. Ziegler, *Mountbatten*, p.157-158.

<sup>34</sup>. COS (41) 732, 9 December 1941; CAB 80/32. Also see, COS (41) 731, 9 December 1941; CAB 80/32.

for preparing the ships and craft under his command for the opposed landings that they would eventually have to undertake.

When Mountbatten took over COHQ the total staff amounted to only 23, including typists and messengers. There were no active service naval officers, no regular air force officers and no signal officers.<sup>35</sup> This was clearly inadequate and is indicative of Keyes's failure as an administrator. As Vice-Admiral Hughes-Hallet commented, Keyes's vision of COHQ did not extend beyond planning for "*a bigger and better Zeebrugge-type raid*".<sup>36</sup> Mountbatten quickly set about expanding the staff of COHQ. In line with the new directive the staff was divided into Operations and Administrative Groups. The latter consisting of a Naval Administrative Staff under Rear Admiral Horan, appointed as Rear Admiral Landing Craft and Bases (RALB), was divided into Personnel, Material, and Ships and Craft sections. The sections of the Operations Group were inter-Service and consisted of Intelligence, Training and Planning sections. Both groups had communications sections.<sup>37</sup> Mountbatten was at great pains to stress that COHQ was an inter-Service organisation. Those who worked in COHQ were not considered representatives of their own Service and any attempt to behave as such was discouraged. Deeply entrenched attitudes of Service loyalty and inter-Service rivalry were bound to be difficult to overcome. It appears that the Naval members of COHQ were the worst offenders in this respect.<sup>38</sup>

Within six months the staff of COHQ grew to over 400. Inevitably with such a rapid expansion there was some extravagance and waste. Economy was not a word generally associated with Mountbatten. There were also allegations of nepotism. This is probably a little unfair. Under Mountbatten COHQ developed into a capable organisation. However, one or two appointments were undoubtedly suspect, that of the Marquis of Casa Maury outstandingly so. A playboy friend of Mountbatten, Casa Maury was appointed head of intelligence at COHQ. The failure of his intelligence branch to assess accurately the strength of German defences at Dieppe contributed to

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<sup>35</sup>. *History of the Combined Operations Organisation*, p.18.

<sup>36</sup>. Ziegler, *Mountbatten*, p.160-161.

<sup>37</sup>. *Ibid*, p.161. *History of the Combined Operations Organisation*, p.20.

<sup>38</sup>. Ziegler, *Mountbatten*, p.161.

the bloody failure of Operation *Jubilee* in August 1942. The original naval commander for *Jubilee*, Vice-Admiral Baillie-Grohman, wrote of Casa Maury, "*I was soon to find him utterly useless*".<sup>39</sup> This experience can hardly have convinced the Navy of the value of an independent COHQ.

Before 1939 there had been no inter-change of information about amphibious operations between the United States and Britain. Even prior to American entry into the war contacts between the Services of these two countries became more regular. In 1941 a British Joint Services Mission (BJSJ) was established in Washington. In order to maintain liaison with the Americans, COHQ sent Captain Knox to the Washington in April 1942 as Combined Operations Liaison Officer (COLO) where he joined the BJSJ with a small staff. In March 1943 the title was changed to Chief of Combined Operations Representative (CCOR) and the post was to continue under this nomenclature after the war.<sup>40</sup> The Americans appear to have been impressed by the inter-Service nature of COHQ. After visiting COHQ in April 1942 General Marshall agreed to the attachment of United States officers to the organisation. Thus, with the arrival of nine American officers in May, COHQ became the first integrated Allied headquarters in London.<sup>41</sup>

On 4 March 1942 Mountbatten was summoned to see Churchill and was informed that he was to be Chief of Combined Operations (CCO) with the acting ranks of Vice-Admiral, Lieutenant-General, and Air Marshal. He would sit as a full member of the COS whenever major issues were in question or when combined operations or any special matters with which he was concerned, were under discussion. The established Chiefs were somewhat nonplussed by this rapid promotion. Both Pound and Brooke made it plain that they were against the decision. Within Combined Operations the move was met with jubilation.<sup>42</sup> At the age of 41 Mountbatten had been made an Admiral two years earlier than had Nelson. The decision highlighted both the

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<sup>39</sup>. Ibid, p.161.

<sup>40</sup>. Fergusson, *Watery Maze*, p.150. *History of the Combined Operations Organisation*, p.31.

<sup>41</sup>. Fergusson, *Watery Maze*, p.150.

<sup>42</sup>. Ziegler, *Mountbatten*, p.168-170.

increasing importance of combined operations to Allied war plans and Churchill's approval of Mountbatten's conduct of affairs. The decision to appoint Mountbatten to equivalent ranks in all three Services illustrated the inter-Service nature of his appointment.

On becoming a full member of the COS Committee Mountbatten instituted a Combined Operations Joint Planner (COJP) in order to influence the JPS and thereby shape the plans being submitted to the COS. Brigadier Macleod was the first COJP, but was replaced due to injury after the Casablanca conference by Brigadier Anthony Head.<sup>43</sup> The Director of Plans agreed to allow the COJP to sit as a fourth member of the JPS whenever they were preparing papers with a combined operations aspect. In the opinion of the post-war staff history:

This arrangement worked well because it meant that the Combined Operations Joint Planner was able to see practically all papers destined for the Chiefs of Staff at their formative stage. The influence of COHQ was thus greatly increased and there was a reduction in friction and disagreement at all levels.<sup>44</sup>

In order to deal with the increased workload at COHQ, Mountbatten created an Executive Committee made up of the naval, air, and military staffs within COHQ.<sup>45</sup>

When Keyes assumed the position of DCO there were only two existing combined operations establishments, excepting the ISTDC. Northney Camp, a peacetime holiday camp on Hayling Island, had been requisitioned and subsequently commissioned on 15 June as HMS *Northney* as a base for landing craft then being built. Improvised raids in June 1940 highlighted the need for properly trained landing craft crews. Consequently a six week course of basic naval training in the handling and maintenance of landing craft was inaugurated at HMS *Northney*. On completion naval personnel transferred to the landing craft and raiding base, HMS *Tormentor* at Warsash, Southampton. Advanced training with Special Service Troops was given at HMS

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<sup>43</sup>. Anthony Head was later to become Minister of Defence for a short period in 1956/1957.

<sup>44</sup>. **History of the Combined Operations Organisation**, p.67.

<sup>45</sup>. *Ibid*, p.60.

*Dorlin* , Archardle. Later training and raiding bases were set up at Brightlingsea and Dartmouth.<sup>46</sup>

With the fall of France it became apparent that there was a requirement for large scale amphibious landings and that therefore combined training facilities would have to be established so that soldiers and sailors could train in the conduct of combined operations. In July 1940 Inverary at the head of Loch Fyne was chosen as the site of the first Combined Training Centre (CTC) where landing craft flotillas could complete their training and where Army training could be carried out on a large scale. Under DCO, Vice-Admiral Hallet assumed command of the CTC with the title Vice-Admiral Combined Training centre (VACTC) on 1 September. The naval wing of the CTC was commissioned as HMS *Quebec* on 15 October.<sup>47</sup>

The CTC at Inverary was expanded during the summer of 1941 and CTC Castle Toward was opened nearby. Naval and combined training was the responsibility of VACTC Hallet, assisted by Major General J.S.Drew, his Army representative. Initially their headquarters was at Inverary but was later transferred to Largs where the headquarters of the expeditionary force created for the projected landings in the Canary Islands was based. The first full scale combined exercise, "*Leapfrog*", on 10 August 1941, highlighted the requirement for a central authority to coordinate the training of amphibious forces. Consequently the Hollywood Hotel, Largs was taken over and used throughout the war as the headquarters for both the expeditionary force (HQEF) and for officers controlling all combined operations activities on the west coast of Scotland and the firth of Clyde. The Hollywood Hotel operated a small training staff and courses for selected officers of all three Services were instituted. Largs was regarded from the Combined Operations point of view as a Staff College. The close proximity of HQEF to the major training establishments and the staff of the Senior Officer Assault Ships and Craft (same building) did much to foster cooperation and understanding, although initially some difficulty was experienced as

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<sup>46</sup>. Clifford, *Amphibious Warfare*, p.128-129. *History of the Combined Operations Organisation*, p.12+92.

<sup>47</sup>. Clifford, *Amphibious Warfare*, p.129. Fergusson, *Watery Maze*, p.57. *History of the Combined Operations Organisation*, p.13+92-93.

the requirements for craft for the expeditionary force conflicted with the long term need to build up and train crews.<sup>48</sup>

From 1941 the Combined Operations Command expanded rapidly. By Spring 1942 there were ten training establishments in the United Kingdom, Table One

**Table One: Combined Operations establishments, spring 1942**

1. Headquarters Combined Training	Largs
2. C.T.C	Inverary
3. C.T.C.	Auchengate, Troon
4. Combined Signal School	Auchengate, Troon
5. C.T.C. for Royal Armoured Corps	Castle Toward
6. Initial Training Centre for Naval personnel and combined operations training for South-Eastern Command	Hayling Island
7. Raiding craft training centre and combined operations training for Southern Command.	Warsash
8. Parent ship for raiding craft and combined operations training for Eastern Command.	Brightlingsea
9. LCT training base.	Bo'ness
10. Special Training Establishment	Archaracle

Officer training gave cause for anxiety as facilities at the RNVR Training Establishment at Hove were not sufficient to cope with the increased requirements. Consequently it was decided that Combined Operations should train their own officers and from August 1942 until the end of the war the naval officers required for Combined Operations were trained at the old Army Battle School at Lochailort. The officers course lasted six weeks. With increased duties VACTC became Vice-Admiral Combined Training in April 1942. In July he adopted the title of Director of Combined Training and moved his staff from Largs to Montague House adjacent to COHQ in London. Here he set up a separate office and staff with responsibility for all combined training under CCO.<sup>49</sup>

As the requirement for combined operations grew so did the world-wide requirement for training. In line with the expansion of facilities in Britain, by 1943 there were a total of twelve overseas training establishments concerned with combined operations. These facilities

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<sup>48</sup>. History of the Combined Operations Organisation, p.94-95.

<sup>49</sup>. Ibid, p.95.

included large CTCs in India, Australia, Canada, and Egypt. COHQ was not responsible for the overseas facilities except in an advisory capacity.<sup>50</sup>

Once the CTC at Inverary had been established the ISTDC relinquished the responsibility for training and concentrated on developing technique in combined operations. With work increasingly centred on the problems of full-scale invasion the ISTDC was unable to meet demand and on 13 April 1942 it was split into two separate parts. One section was brought to COHQ and came under Captain T.A.Hussey (RN) who became Coordinator of Experiments and Developments (CXD). CXD had officers from the three Services and civilian scientists assigned to him. In August the title of CXD was changed to the Director of Experiments and Staff Requirements (DXSR). The remainder of the old ISTDC stayed at Portsmouth and became the Combined Operations Development Centre. On 2 August 1942, due to the steadily increasing volume of experimental work, the Combined Operations Experimental Establishment (COXE) was set up in the Westward Ho-Bideford area. The region boasted a wide variety of beach conditions, vital for experimental work. From August 1942 COXE studied, developed and tested virtually every item of equipment of possible use in combined operations. Two permanent composite flotillas, one of major and one of minor landing craft, were kept by COXE to aid them in their work.<sup>51</sup>

Prior to the outbreak of war prototype Landing Craft, Assault (LCA), Landing Craft, Mechanised (LCM), and Landing Craft, Support (LCS) were built.<sup>52</sup> An ISTDC report of April 1939 prompted an order for 18 LCA, 12 LCM and two LCS. However, production of landing craft lagged behind requirements. Only four LCA, one LCM and five old Motor Landing Craft were employed in the disastrous Norwegian campaign. They did sterling work but were all lost. Similarly the nine LCA and four LCM employed at Dunkirk performed well but suffered heavy losses. At the end of that operation the specialist

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<sup>50</sup>. Clifford, *Amphibious Warfare*, p.130.

<sup>51</sup>. DEFE 2/1790. Fergusson, *Watery Maze*, p.149+192-193. *History of the Combined Operations Organisation*, p.31+156-163.

<sup>52</sup>. Brian Friend, "Landing Craft Through the Ages - Part 2" p.32-47. L.E.H.Maund, "The Development of Landing Craft", in *RUSI Journal*, February-November 1945, p.213-217.



amphibious lift in Britain consisted of only four worn out LCA and one LCM.<sup>53</sup>

In summer 1940 orders were placed for 199 LCA, 31 LCM and eight LCS; the maximum that could be produced within the confines of dockyard space and engine production. By March 1941 an order for a further 104 LCA had been placed. In order to supplement British production 135 "R" craft (later Landing Craft, Personnel (Large) (LCP(L))) were ordered from the Eureka Tug Boat Company of New Orleans. Three 10,000 ton fast *Glen* class passenger carrying cargo ships were converted to Landing Ship, Infantry (Large) (LSI(L)) with accommodation for 1,000 troops and these became the first of a series of conversions of merchant ships for combined operations purposes. Design details for the first Landing Craft, Tank (LCT) were worked out during the summer of 1940 and trials of the first LCT(1) were conducted in November. Production and development pressed on. Before the end of 1940 preliminary designs for a Landing Ship, Tank (LST) capable of carrying twenty 25 ton tanks had been undertaken.<sup>54</sup>

Britain could not construct all the landing ships and craft it needed from its own resources. British shipyards were working to capacity. Even the order for the first LSTs, three LST(1), had resulted in the cancellation of nine corvettes.<sup>55</sup> In September 1941 Admiral Dorling, the Admiralty Supply Representative at the BJSN in Washington, received a list of Navy requirements for the spring of 1943. These included the provision of 1,300 sea going craft for tanks and vehicles. This list was superseded by another requesting 2,250 of these craft. In November COHQ sent a mission to the United States headed by Captain Tom Hussey from the ISTDC and accompanied by representatives from the Navy and the Director of Naval Construction. Their task was to gain the maximum support from the

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<sup>53</sup>. DEFE 2/1294, **The Evolution and Development of Combined Operations Technique and Material.**

<sup>54</sup>For details on landing ships and craft see **Allied Landing Craft of World War Two**, (London: Arms and Armour Press, 1985). This booklet is a reproduction of the wartime United States Navy, Division of Naval Intelligence Manual ONI 226. Also see, DEFE 2/1327; ADM 239/242; ADM 239/357; DEFE 2/764. Useful secondary sources include J.D.Ladd, **Assault from the Sea 1939-1945; The Craft, The Landings, The Men**, (London: David and Charles, 1976); Brian Friend, "Landing Craft Through the Ages" in **Warship** Volume 45 and 46, and the relevant chapter in Robert Gardiner (ed.), **The Eclipse of the Big Gun: The Warship 1906-1945**, (London: Conway Maritime Press, 1992).

<sup>55</sup>. ADM 239/242.

as yet unmobilised resources of America. Negotiations were under way when the Japanese attacked Pearl Harbour. On 7 January 1942 President Roosevelt approved all the items requested by COHQ. The alliance with the United States was to prove highly lucrative for Combined Operations. By April 1944, Britain had received from its ally four Landing Ship, Dock (LSD), 84 LST, 168 Landing Craft, Infantry (LCI), in addition to numerous LCTs, LCMs and small craft "*beyond compute*".<sup>56</sup>

The ships and craft that took part in the major landings of World War Two were designs that had been undertaken and completed in the demanding conditions of wartime. There was no time to build prototypes; lessons had to be learnt by bitter experience. The assault craft were required in a hurry and were built with the methods and materials that were readily available at the time. The LCT(2) was powered by an unsatisfactory aero-engine as this was all that was available. In all British LCTs prior to the LCT(8) the ramp door was operated by inefficient hand winches as there were insufficient powered winches. The LCTs had originally been intended to operate only in fair or mild weather. This did not prove to be the case. Early types stood up well to the rough treatment they received but with the lighter, shallower LCT(4) the stresses began to tell. Designed solely for cross channel work, a number of LCT(4) were required to sail to the Mediterranean under their own power to participate in the Sicilian landings. All encountered trouble due to their light construction. Some broke their backs and one broke in half in the straits of Gibraltar.<sup>57</sup>

By their very nature these shallow draught vessels were difficult to handle. This was made worse in the LCTs, which were fitted with propellers which both turned in the same direction. The assault fleet was crewed largely by Royal Naval Reserve (RNR) or Royal Naval Volunteer Reserve (RNVR) officers and Hostilities Only ratings. Conditions aboard the early landing craft were primitive and posed special problems for young inexperienced officers denied the comfort and privacy of the normal wardroom and officer's accommodation.

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<sup>56</sup>. Fergusson, *Watery Grave*, p.110-118.

<sup>57</sup>. DEFE 2/1327 + ADM 239/242.

While it is true that conditions aboard submarines were more cramped, few of the early LCT crews had the spur of operations and the *esprit de corps* that the submariners had. Nor did they have a depot ship to return to in harbour.<sup>58</sup> Under such conditions it was difficult to maintain traditional approaches to dress and discipline. In April 1942 Admiral Ramsey reported to Mountbatten that he was unhappy with the state of discipline among landing craft crews.<sup>59</sup> It may have been difficult for regular Naval officers to appreciate the difficulties facing these men. Fortunately living standards in ships and major craft did improve. The LST(3) actually boasted better living conditions than its American predecessor.<sup>60</sup> Although some deficiencies in training did manifest themselves during the North African and Sicilian landings, this was only to be expected from a new and expanding force. The crews of the assault fleet were to prove their worth during the Normandy campaign.

The assault fleet made heavy demands on naval manpower. In order to help meet these demands and to provide manpower for additional Commandos the Royal Marine Division was disbanded in the summer of 1943. In a major break with tradition, Royal Marine officers were allowed to command major landing craft. By 1944 500 officers and 12,500 other ranks Royal Marines were manning landing craft alongside 5,500 RNVR and 43,500 Hostilities Only men.<sup>61</sup>

In December 1941 COHQ had taken over the administrative responsibility for landing ships and craft. By June 1943 it controlled an armada that included 113 landing ships and 3,979 barges and landing craft. The Admiralty now wanted them back, claiming that the assault fleet had grown too large to be dealt with by Combined Operations Command.<sup>62</sup> The desire to control what threatened to become a private navy may also have played a part in the decision. In

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<sup>58</sup>. Peter Lund and Harry Ludlam, *The War of the Landing Craft*, (London: W.Foulham, 1976) p.31.

<sup>59</sup>. Rear Admiral W.S.Chalmers, *Full Cycle - The Biography of Admiral Sir Bertram Home Ramsey*, (London: Hodder and Stoughton, 1954) p.136.

<sup>60</sup>. DEFE 2/1327 + ADM 239/242. Brian Macdermott, *Ships Without Names: The Story of the Royal Navy's Tank Landing Ships of World War Two*, (London: Arms and Armour Press, 1992) p.86-87.

<sup>61</sup>. *History of the Combined Operations Organisation*, p.67-69. Ziegler, Mountbatten, p.205-206.

<sup>62</sup>. Ziegler, Mountbatten, p.206. DEFE 2/782A.

November 1942 the COS accepted the principle of the Admiralty case. Talks began with the Admiralty on 29 December 1942 although it was not until August 1943 that the hand over of the invasion fleet and its bases was complete.<sup>63</sup>

In January 1943 the Casablanca conference decided to establish a Combined Staff to take over planning for a return to the Continent. It was too early to elect a supreme commander or his deputy, but Lieutenant-General Morgan was selected to fill the position of Chief of Staff to the Supreme Allied Commander (designate) (COSSAC). Morgan took up his post on 13 April 1943. Mountbatten had wanted to be designated as one of the authorities responsible for the preparation of the invasion plan. However, not being one of the force commanders his responsibility was confined to the provision of technical advice on all aspects of the assault. It was inevitable that with the appointment of COSSAC the role of COHQ in preparing for the invasion of France would be gradually eclipsed and in August Mountbatten left COHQ to take up another important post, that of Supreme Allied Commander, Southeast Asia. He was replaced by Brigadier Robert Laycock, an army officer with wide experience of amphibious operations.<sup>64</sup> COHQ had carried the burden of developing amphibious warfare from its humble position in 1940 to the point where it represented a war winning instrument.

The two distinct types of amphibious operation undertaken during the war were large scale operations conducted as a preliminary to major land campaigns and amphibious raids. Britain has a tradition of amphibious raiding dating back to Roman times. From the sixteenth century raiding forces had frequently been landed either to destroy enemy facilities and shipping, or to draw forces away from another front. During the First World War the British launched raids against enemy submarine facilities at Zeebrugge and Ostend, with mixed results. The idea of amphibious raiding appealed to Churchill's aggressive instincts. Following the fall of France he remarked:

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<sup>63</sup>. *History of the Combined Operations Organisation*, p.67-69. Ziegler, Mountbatten, p.205-206.

<sup>64</sup>. Laycock was an impressive personality, the heroic character Blackhouse in Evelyn Waugh's *Officers and Gentlemen* was based on him. Selina Hastings, *Evelyn Waugh: A Biography*, (London: Minerva, 1995) p.573.

We have got to get it out of our minds the idea that the Channel ports and all the country between them are enemy territory.....Enterprises must be prepared with specially trained troops of the hunter class, who can develop a reign of terror down these coasts.<sup>65</sup>

It was appreciated from the outset that amphibious raiding would require specialist troops. No existing formed unit could be spared from the pressing requirements of home defence so new units were created. Commandos, named after the Boer Commandos of the South African War, were raised from the various Army commands within Britain. Ten Commandos, each of 500 men, were to be formed by selecting suitable volunteers and from the Independent Companies raised by the War Office for operations in Norway. In autumn 1940 the Commandos and Independent Companies were reorganised into five Special Service Battalions, each consisting of two 500 man companies. The five battalions made up the Special Service Brigade under Brigadier J.C.Haydon who was appointed to the post on 9 October. The Special Service Battalion organisation proved cumbersome and on the initiative of Haydon it was abandoned in Spring 1941 in favour of the original Commando concept, with twelve Commandos.<sup>66</sup>

Despite having an obvious role to play in amphibious warfare the Royal Marines played little part in such operations in the early stages of the war. A Royal Marine Brigade was raised for operations in Norway but was not ready in time for action. It was dispatched to Dakar for the projected landing there but was again frustrated when that operation was aborted. In August 1940 it was decided to raise a Royal Marine Division of three brigades. This too saw no action. Mountbatten regarded the Division as a ready source of manpower for the Commandos. He gained Admiralty permission to raise a Royal Marine Commando which came into being in February 1942 at Deal in Kent. A second Royal Marine Commando was raised later in the year and these became No.s 40 and 41 (RM) Commandos. In July 1943 the Royal Marine Division was disbanded. Mountbatten secured the agreement of the ISL that the manpower released should be

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<sup>65</sup>. Terraine, *Life and Times*, p.83.

<sup>66</sup>. *History of the Combined Operations Organisation*, p.110.

employed in combined operations. Many of the men went to man landing craft, others formed new Commandos. On 1 August 1943 six new Royal Marine Commandos were formed and the first, No.43, moved to the Commando depot at Achnacarry to undergo the Commando course. Unlike the Army Commandos these units did not consist of volunteers, but were drafted straight from the old Royal Marine Division. The Army Commandos, fiercely proud of their skills and achievements, were initially resentful of these new units, considering them unworthy of the title "*commando*".<sup>67</sup>

Raids varied in size and character from the landing of a handful of men armed only with small arms to the major assault on Dieppe by the 2nd Canadian Division and three Commandos in August 1942. The first major raid was in May 1941. The Norwegian island of Lofoten was attacked by No.3 and No.4 Commandos. They spent six hours ashore destroying eleven factories, 800,000 gallons of fuel and five ships, bringing back 225 prisoners and 314 Norwegian volunteers.<sup>68</sup> Other notable raids include an attack on the Norwegian island of Vaagso by two Commandos on 27 December 1941, in conjunction with a second raid on Lofoten; and the seizure of secret German equipment from a radar station at Bruneval near Le Havre in a raid in February 1942. Operation *Jubilee*, the assault on Dieppe on 19 August 1942, was the largest raid of the war. The attack itself was a bloody failure resulting in the death of 1,000 Canadians and the capture of 2,000 more.<sup>69</sup> Following *Jubilee* it was agreed to set up a naval force permanently organised for raiding. The result was Force J which established its headquarters under the command of Captain Hughes-Hallet at the Royal Yacht Squadron at Cowes, renamed HMS *Vectis*. Dieppe was the last major raid of the war. Although minor raids continued to be conducted after August 1942 the emphasis shifted towards preparation for large scale operations. The ever present need to divert resources to preparations for full-scale invasion

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<sup>67</sup>. Charles Messenger, *The Commandos 1940-1946*, (London: William Kimber, 1985) p.122-123+173. Brigadier Durnford-Slater, *Commando: Memoirs of a Fighting Commando in World War Two*, (London: Greenhill Books, 1991) p.171.

<sup>68</sup>. For lively first hand accounts of the Norwegian raids see Durnford-Slater, *Commando*, and Peter Young, *Storm from the Sea*, (London: William Kimber, 1958).

<sup>69</sup>. Hunt and Schurman, "Prelude to Dieppe: Thoughts on Combined Operations Policy in the *Raiding Period, 1940-1942*", in Gerald Jordan (ed), *Naval Warfare in the 20th Century: Essays in Honour of Arthur Marder*, (London: Croom Helm, 1977) p.186-209. Ziegler, *Mountbatten*, p.186-196.

prejudiced the requirements for raiding. In May 1943 Force J, mercilessly plundered of its ships and craft, had virtually ceased to exist. Hughes-Hallet left to take up a post as COSSAC's principle British naval staff officer.<sup>70</sup>

In November a major reorganisation of the Commandos took place. With the requirement for raiding giving way to larger scale amphibious assaults and more sustained operations, changes were required. Lightly equipped units were not suited for the sustained infantry operations they were likely to have to conduct. Operation *Ironclad*, the assault on Madagascar, indicated that in future the main role of the Commandos would be to act as the spearhead of major assaults. The Special Service Brigade was replaced by a Special Service Group, commanded by Major-General Sturges. Under it the eight Army and eight Royal Marine Commandos were grouped into four Special Service Brigades. In addition an Operational Holding Commando was set up to facilitate the easy reinforcement of Commandos operating in the field. In order to alleviate Army Commando antipathy towards the Royal Marines Sturges combined the two varieties within the Special Service Brigades. Operational experience soon taught the Army Commandos that the Royal Marine Commandos were worthy of the title.<sup>71</sup>

The Commando idea was not universally accepted. These units tended to hog the limelight and poach the best officers, NCOs and men from existing units. Field Marshal Alanbrooke believed that the Commandos should never have been raised as an independent force. His successor as Commander-in-Chief Home Forces, General Sir Bernard Paget, shared the belief that Commando operations could have been better done by a unit of the field army.<sup>72</sup> Brigadier Durnford-Slater recalled that as commander of No.3 Commando his unit experienced constant obstruction from the Army, and he contrasted this with the help and understanding offered by the Navy.<sup>73</sup> Army antipathy towards the Commandos demonstrated an ignorance of the requirements of amphibious raiding. The kind of quick raids

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<sup>70</sup>. Fergusson, *Watery Maze*, p.184-196.

<sup>71</sup>. *History of the Combined Operations Organisation*, p.110.

<sup>72</sup>. Messenger, *The Commandos*, p.60.

<sup>73</sup>. Durnford-Slater, *Commando*, p.34-36.

and specialist operations undertaken by the Commandos throughout the war required intense training, not only in military skills but also in boatwork and the art of rapid and silent disembarkation on unknown shores, often in the dark. By their very nature Commandos were called upon to perform tasks beyond the capabilities of conventional infantry.

In theory the dual functions of preparing for invasion and of raiding were complementary but in practice they competed for limited resources and training facilities. Raiding was considered by some to be a futile diversion of effort. Although small raids could not change the course of the war, raiding helped to maintain the offensive spirit amongst British troops and civilians when little was going well for the Allies. The vulnerability of the European coastline forced the Germans to divert to its defence men and resources that could have been better used elsewhere. Raiding provided practical experience in the problems of amphibious warfare. It also provided a valuable tool for special operations such as the attack on St. Nazaire or the seizure of radar equipment from Bruneval.

The North African landings of November 1942 were followed in 1943 by major Allied landings at Sicily in July and Salerno in September. These landings involved the use of an ever increasing variety of special craft and equipment and demonstrated a growing competence in the techniques of amphibious warfare. Operation *Overlord*, the invasion of Normandy on 6 June 1944, was the largest amphibious operation of all time. The magnitude of the task faced by the planners was reflected by the size of the naval orders issued by Admiral Ramsey, Naval Commander-in-Chief for *Neptune*, the naval side of *Overlord*. In 1915 Admiral de Robeck's naval orders for the Gallipoli landings covered 30 pages of foolscap and were believed to have covered every conceivable subject.<sup>74</sup> Admiral Ramsey was first called to Norfolk House in London to study the problem of a return to the Continent in 1942. The orders he issued for *Neptune* ran to nearly 1,000 pages.<sup>75</sup>

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<sup>74</sup>. Keyes, *Naval Memoirs*, p.281.

<sup>75</sup>. Corelli Barnett, *Engage the Enemy More Closely; The Royal Navy in the Second World War*, (London: Hodder and Stoughton, 1991) p.780.



## Chapter One: Table Two

### Ships and Craft Participating in Operation Neptune

<u>Type</u>	<u>British</u>	<u>U.S.</u>	<u>Other</u>	<u>Total</u>
<b>Warships</b>				
Battleships	4	3	-	7
Monitors	2	-	-	2
Cruisers	17	3	3	23
Fleet Destroyers	46	34	6	86
<i>Hunt</i> class				
Destroyers	21	-	4	25
Midget Subs	2	-	-	2
Sloops	14	-	-	14
Frigates and				
Destroyer escorts	53	6	4	63
Corvettes	63	-	8	71
Patrol Craft	-	18	-	18
ASW Trawlers	60	-	-	60
Minelayers	4	-	-	4
Minesweepers	262	25	-	287
Coastal Craft	360	111	24	495
Seaplane Carriers	1*	-	-	1
<b>Landing Ships and Craft</b>				
HQ Ships	10	2	-	12
Attack Transports	-	10	-	10
LSI	55	-	-	55
LSD+LSE	12	-	-	12
LST	130	143	-	236
LCA	448	54	-	502
LCC/LCH	11	15	-	26
LCI	130	118	-	248
LCT	607	230	-	837
LCG	9	16	-	25
LCS	85	36	-	121
LCT(R)	36	-	-	36
LCP(Smoke)	106	48	-	154
Misc small craft and barges	-	-	-	1,850

\* - employed as a floating workshop

The number and variety of ships and craft employed for *Overlord* was unprecedented, see table two.<sup>76</sup> Air support was provided on a massive scale and the initial assault was covered by the fire of six battleships, 23 cruisers and around 100 destroyers. Five divisions were landed in the initial assault, supported by two airborne divisions, dropped prior to the seaborne landing. By midnight on D-Day 75,200 troops had been landed from the sea in the British sector and 57,000 in the American. With the 23,000 men of the airborne force this made a total of approximately 156,000. The Eastern (British) Task Force alone had landed 900 tanks and armoured vehicles, 240 field guns, 280 anti-tank guns and 4,300 tons of stores.<sup>77</sup> To compensate for the lack of harbour facilities, two artificial harbours, *Mulberries*, were constructed, one at Arromanche and the other at Saint-Laurent. The Arromanche *Mulberry* was completed by 20 July and had soon exceeded the designed handling ability of 6,000 tons of stores a day.<sup>78</sup> Amphibious operations on this scale were truly inter-Service activities. Only by working together closely could the Army, Navy and Air Force provide the necessary level of forces to bring success.

During World War Two amphibious warfare developed from a largely neglected activity into a major strategic capability. It gave the maritime powers a powerful new weapon: the ability to deploy and support large modern armies on an enemy coastline at a time and place of their own choosing. It was by exploiting the capabilities of amphibious warfare that the Anglo-Americans were able to launch successful assaults on the mainland of Europe in 1943 and 1944, sealing the fate of the Wehrmacht, which had already been weakened by the pounding it had received in the Soviet Union. This represented something of a triumph for the *British way in warfare*; certainly Stephen Roskill portrayed it as such.<sup>79</sup> However, it should be remembered that a maritime strategy was only adopted in 1940 after German success in western Europe ejected the British from the Continent, ruling out any other approach. Furthermore, had it not

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<sup>76</sup>. S.W.Roskill, *The War at Sea 1939-1945. Volume 3, Part 2, The Offensive*, (London: HMSO, 1961) p.19.

<sup>77</sup>. Ibid. p.53. Chalmers, *Full Cycle*, p.231.

<sup>78</sup>. John Cresswell, *Sea Warfare 1939-1945*, (Los Angeles: University of California Press, 1967) p.226.

<sup>79</sup>. S.W.Roskill, *The War at Sea. Volume 3, Part 2*, p.387-409. Also see S.W.Roskill, *The Strategy of Seapower*, (London: Collins, 1962).

been for the exhausting struggle on the eastern front the Anglo-American armies could not have established themselves in Nazi occupied Europe so easily.

Amphibious warfare played an important role in the Allied strategy against Germany, it was central to the war against Japan. Once the tide of war had turned against the Japanese at the battles of the Coral Sea and Midway, the American launched an amphibious drive across the south and central Pacific. Beginning at Guadalcanal in the Solomons the Americans launched a series of amphibious assaults culminating in the hard fought victories at Iwo Jima and Okinawa in February and April 1945.<sup>80</sup> This was largely a maritime war with marines supported by naval gunfire and carrier based aircraft seizing forward bases. For the United States Navy amphibious assaults were conducted to further the war at sea. The Royal Navy's experience was different. In Europe major amphibious operations were conducted as a prelude to land campaigns; campaigns which were vital for Allied victory but which could have only an indirect effect on the war at sea. The Navy was essentially operating in support of the Army, transporting and landing troops and supporting them once ashore. Admiral Ramsey was aware that it was his job to land the troops where and when they wanted.<sup>81</sup> The Navy was a means of allowing Britain to return to a Continental strategy, where the soldiers in France represented the main war effort. This was a necessary task but not a glamorous one and not one which the Navy saw as its defining mission.

It took years of preparation to provide the amphibious capability required to conduct the successful European landings of 1943 and 1944. One could no longer rely on troops landed from warships in ships boats to defeat a modern enemy. A specialist capacity was required to succeed in amphibious warfare. Combined Operations began to resemble something of a fourth Service, requiring a high level of manpower and a considerable amount of resources. There was an independent Combined Operations Headquarters, the CCO sat on the COS Committee when relevant subjects were discussed, and

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<sup>80</sup>. Philip A.Crowl + Jeter A.Isley, **The US Marines and Amphibious War - Its theory, and its practice in the Pacific**, (Princeton: Princeton University Press, 1951) passim.

<sup>81</sup>. Barnett, **Engage the Enemy**, p.763-767.

there was a Combined Operations representative on the JPS. The Admiralty was suspicious of the Combined Operations organisation. The mistrust and suspicion that Keyes aroused when DCO was never entirely laid to rest. Both Sir Phillip Vian and Rhoderick McGrigor were considered by Churchill as possible replacements for Mountbatten as CCO. It is indicative of the Admiralty's attitude towards COHQ that both officers were warned that if they valued their careers they should refuse the appointment.<sup>82</sup> Admiral Manley Power believed that Andrew Cunningham "*took against*" Mountbatten when he was promoted to CCO; prior to this they had got on well.<sup>83</sup>

Such suspicion was inevitable. Amphibious warfare made greater demands on the Navy than it did on the other two Services. By October 1943 the Royal Navy had grown from a complement of 127,000 officers and men at the outbreak of war to 750,000 men and over 55,000 women. Nevertheless the Navy was faced with severe manpower shortages and by the end of 1943 had decided to lay up the battleships *Resolution*, *Ramillies*, *Revenge*, and *Malaya* in an attempt to alleviate these difficulties.<sup>84</sup> The tens of thousands of men manning landing ships and craft could have been employed profitably within the conventional Navy. The support of amphibious operations placed demands on an already overstretched fleet. The Navy had to strip all other commands to the bare minimum and stop the Arctic convoys in order to provide the necessary support for the Normandy landings. Amphibious operations had little positive effect on the war at sea prior to the invasion of Italy, which led to the surrender of the Italian fleet. One exception was the raid on St. Nazaire which destroyed the only dock on the French Atlantic coast large enough to accommodate the *Tirpitz*. However, amphibious operations could have a negative effect. They took men and resources which could otherwise have been devoted to the fleet. It is therefore not entirely surprising that after the war the Admiralty was at best luke-warm in its support of amphibious capabilities.

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<sup>82</sup>. Fergusson, *Watery Maze*, p.293.

<sup>83</sup>. MANP, *Memoirs of Admiral Sir Manley Power*. Churchill Archives Centre, Cambridge.

<sup>84</sup>. Barnett, *Engage the Enemy*, p.771.

## **CHAPTER TWO**

### **THE TORCH OF COMBINED OPERATIONS**

Post-war attitudes towards amphibious warfare in Britain were heavily influenced by recent wartime experience. In the aftermath of the Normandy landings the Services accepted the need to be prepared to conduct large scale amphibious operations in the future. The possibility of giving the Royal Marines primary responsibility for amphibious warfare was raised and rejected. Large scale amphibious operations on the Normandy model required the participation of all three Services and not one small specialist corps. The maintenance of a permanent, independent, inter-Service Combined Operations organisation was approved and plans were laid for an extensive training organisation. The decision not to give the Royal Marines a statutory responsibility for amphibious warfare removed one reason for Admiralty support for amphibious capabilities. Such responsibility would have facilitated Naval control of Combined Operations and would have provided a distinct and unique role for the Marines, promoting their institutional survival. With amphibious warfare the responsibility of an independent organisation, under the existing concepts of future amphibious operations the Admiralty could expect to receive only a series of demands for manpower and construction that would take resources away from the main fleet. This was something the Admiralty repeatedly sought to avoid. Facing a series of cuts in both finance and manpower the Admiralty devoted the maximum possible resources into maintaining the conventional fleet.

Prior to the Normandy landings 1SL, Sir Andrew Cunningham, had raised the possibility of giving the Royal Marines greater responsibility for amphibious warfare. In a paper submitted to the COS on 11 May 1944 he called for the Marines to be given a definite and statutory responsibility for the provision, training and technical development of all special assault forces in the future.<sup>1</sup> In discussion with the COS, Cunningham argued that the Royal Marines should be the source of amphibious expertise. He accepted the requirement for an inter-Service organisation responsible to the COS Committee for

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<sup>1</sup>. COS (44) 414(o), 11 May 1944, memo by the 1SL; DEFE 2/1178.

the inter-Service aspect of combined operations but visualised the CCO of the future being a Royal Marine officer with a “*divided*” responsibility. It appears that Cunningham envisaged a CCO whose allegiance was split between the Admiralty and Combined Operations. The COS agreed to set up an inter-Service committee to look into the matter.<sup>2</sup>

As a result on 19 May the Committee on Inter-Service Responsibility for Amphibious Warfare was appointed. Better known as the RAW Committee it was chaired by the DCAS, Air Marshal Sir Norman Bottomley, and consisted of the DCIGS, Lt-General Sir Ronald Weeks, Vice-Admiral G.L.A. Miles, CCO Major-General Laycock and the GOC Royal Marines, Sir Thomas Hunton. The Committee was issued with the following terms of reference:

To consider future inter-Service responsibility for amphibious warfare with particular reference to the employment of the Royal Marines; it being recognised that the retention of a Combined Service element on the lines of that already existing in COHQ will be essential to any future amphibious warfare organisation.<sup>3</sup>

The inter-Service nature of amphibious warfare was stressed from the outset, which was hardly surprising considering that the three Services were currently working closely together in the build up to *Overlord*. The report of the RAW Committee was submitted to the COS on 29 June 1944, 23 days after the Normandy landings.<sup>4</sup>

The Committee worked from the premise that it was their first duty to ensure that in future there would be no recurrence of the situation at the start of the War when there had been neither the equipment, personnel or knowledge required to conduct even small scale raids. Preparation for amphibious warfare had to be regarded as a permanent commitment. The Committee approved of the existing system where CCO was the central advisory body, the Service Ministries were the executive authorities responsible for the provision of equipment and personnel, and commanders-in-chief and force

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2. COS (44) 161 mtg, 18 May 1944; DEFE 2/1178.

3. COS (44) 164 mtg, 19 May 1944; CAB 79/74.

4. COS (44) 166, **Report by Committee on Inter-Service Responsibility for Amphibious Warfare**, 29 June 1944; CAB 80/44.

commanders were responsible for actual operations. They considered that it would be a mistake to set up a self-contained amphibious warfare organisation with both advisory and executive functions. The Committee thus recommended retention of a permanent, central, independent, inter-Service amphibious warfare organisation. They rejected the suggestion that a permanent nucleus of the staff of the central organisation should be provided by the Royal Marines. Amphibious warfare was an inter-Service responsibility and officers from each of the three Services should have an important contribution to make. COHQ as currently organised fulfilled their essential requirements so the Committee recommended its maintenance as the permanent central organisation for amphibious warfare. They considered that CCO should continue with basically the same responsibilities and that he should continue to be subject to the direction of the COS, be available to attend the COS Committee and be responsible to the Minister of Defence.

The RAW Committee reflected current thinking on amphibious warfare, based on recent experience in Europe. Amphibious assaults were viewed as the prelude to a wider land campaign and not as an end in themselves:

An assault force must be ready to treat the assault phase merely as a preliminary to fighting a land battle. It must learn amphibious technique as but one of the other techniques required in the rest of the campaign.<sup>5</sup>

Specialist amphibious capabilities were to be devoted primarily to the problem of conducting large scale assaults prior to a major land campaign.

As the three Services would provide the assault forces in war a standing, specialist assault force was not required. They therefore ruled out the creation of a specialist amphibious corps along the lines of the United States Marine Corps (USMC). Such a corps would not fit into the framework of post-assault operations which would be undertaken primarily by the Army supported by the RAF. In addition Britain was unlikely to be able to maintain a large enough force devoted primarily to the assault phase and so army units would still

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<sup>5</sup>. Ibid.



need to be trained to supplement it in the amphibious assault. The possibility of creating a permanent amphibious brigade of Royal Marines was investigated. This had the advantage of providing an amphibious striking force for use in "*emergencies short of war*". However, the proposal was rejected as it did not fit the existing concept of amphibious operations outlined above. The Committee conceded that the availability of an amphibious striking force to deal with minor disturbances short of war was attractive but concluded that in such circumstances the requirement to assault strongly defended beaches was doubtful and it should therefore be possible simply to employ the nearest Army unit. In their view:

There is no escaping the conclusion that the Army itself must be ready to find the assault force required in war.

In order to prepare the three Services for amphibious operations it was proposed to train at least one division each year, along with appropriate naval and air force units. The Committee envisaged the basic training of brigade groups at CTCs, with the collective training of the division taking place during an annual amphibious training season. To ensure effective combined training in peacetime a permanent Naval Assault Force would be maintained under Admiralty control, to be made available to CCO during the training season. In addition, a number of specialist units would be retained in order to help with training and to form the nucleus of special units required in war. Such specialist units were to consist mainly of Royal Marines and would include a small Special Service Group consisting of a headquarters, two Commandos and a Small Operations Group.

The Naval Assault Force proposed would be able to lift one division. The majority of this force would only be manned during the Army collective amphibious training season but a proportion would need to be permanently manned and available. The Committee stressed that without properly fitted assault shipping, realistic and effective amphibious training in peace-time would be impossible. In addition to providing realistic collective training the Naval Assault Force would provide a nucleus upon which to expand in war. This force would consist of a total of 64 landing ships, 135 major landing craft and 256 minor craft, see table one.



**Table One: The Naval Assault Force**

<b>Ships</b>		<b>Major Craft</b>	
LSH(L)	1	LCT(8)	48
LSH(S)	3	LCI(L)	36
LSI(L)	6	LCH	3
LSF	1	LCG(M)	24
LST	36	LCS(R)	24
LSD	3	<b>Total</b>	<b>135</b>
M/T Ships	6		
LSP	5		
LSE	1		
LC Parent Ship	1		
LS Maint. Ship	1		
<b>Total</b>	<b>64</b>		

Plus a total of 256 minor craft.

The total manpower requirement for the force was 16,250 men; a very large total for what was essentially a peacetime cadre. Unless amphibious warfare was to be accorded a very high priority in the peacetime defence organisation these demands could not be met.<sup>6</sup>

The RAW Report was subjected to detailed discussion by the COS.<sup>7</sup> Admiral Cunningham established a small committee under the chair of Rear-Admiral R.M.Servaes to assess the report.<sup>8</sup> The findings of this committee were reflected in an Admiralty memorandum submitted to the COS on 22 July.<sup>9</sup> While accepting many of the Committee's recommendations, the Admiralty took issue with some key points. They rejected the requirement for a permanent Naval Assault Force of the size recommended. Such a large force would prejudice the maintenance of an adequate post-war fleet. More fundamentally, the Admiralty could not agree with the requirement for a central, independent, inter-Service organisation on the model of COHQ. The 1SL noted that under the present (and proposed) system of responsibility advice to the COS on amphibious warfare was divorced from the responsibility for the provision of personnel and resources and the planning and execution of operations. The former was the responsibility of COHQ, the latter of the Services. Therefore the Admiralty could be open to pressure to provide manpower and resources from an outside body divorced from executive responsibility.

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<sup>6</sup>. Ibid.

<sup>7</sup>. COS (44) 226 mtg(o), 7 July 1944; CAB 79/77.

<sup>8</sup>. Clifford, **Amphibious Warfare**, p.189-191.

<sup>9</sup>. COS (44) 132, 22 July 1944 memo by Admiralty; CAB 80/44.

Cunningham revived proposals first raised in 1943 for the Combined Operations Organisation to be run as an inter-Service committee within the COS organisation along the lines of the JPS. Members of this committee would remain responsible to their parent Service.<sup>10</sup> Laycock strongly rejected this proposal, doubting whether an inter-Service committee “*representing as it would the views of the three Service Ministries*” would monitor combined operations policy as impartially as an independent organisation. He also doubted the ability of such a committee to effectively administer all the Combined Operations establishments and units.<sup>11</sup>

Laycock was accurate in his assessment of post-war decision making when he suggested that:

....it would be demanding a utopian degree of impartiality if we adopted a system which, if it is to work, relies on the voluntary acceptance of considerable sacrifice and inconveniences by an individual service for the good of a combined technique.<sup>12</sup>

Neither the Army nor the RAF would support the Admiralty proposals and the Report by Committee on Inter-Service Responsibility for Amphibious Warfare was approved in principle by the COS on 29 July.<sup>13</sup> It was agreed that COHQ should continue in its present form for the duration of the war and that its organisation in the post-war period would depend upon what machinery was established to handle defence matters in peacetime. A new directive was issued to Laycock, based upon that recommended by the RAW Committee.<sup>14</sup>

The tri-Service requirements for post-war training in combined operations were discussed at an inter-Service meeting held in COHQ on 18 October 1945 and following this, in November, Laycock outlined his proposals to the COS.<sup>15</sup> Echoing Army proposals, he

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<sup>10</sup>. Ibid.

<sup>11</sup>. COS (44) 133, 24 July 1944, memo by CCO; CAB 80/44.

<sup>12</sup>. Ibid.

<sup>13</sup>. COS (44) 252 mtg(o), 29 July 1944; CAB 79/78.

<sup>14</sup>. COS (44) 157, 31 August 1944; CAB 80/44.

<sup>15</sup>. Folio 51, docket CR 251/45; DEFE 2/1315. COS (45) 299, 24 November 1945 memo by CCO; CAB 79/42.

based his scheme on the principle that training in combined operations would be accepted as part of the normal training commitment of each Service.<sup>16</sup> In addition to the existing COXE and Combined Operations Signal School (COSS), he recommended setting up a school of combined operations as a centre for study, instruction and staff training in the tactics, doctrine and technique of combined operations. It was proposed to situate both the school and COSS at Bideford near COXE, where suitable and favourable beach conditions existed within easy reach of the landing craft base at Appledore. For unit and formation training Laycock concurred with the Army view, proposing to set up Combined Training Establishments (CTEs) in the three main areas where British forces were concentrated; Europe, the Middle East and the Far East.<sup>17</sup> Laycock's proposals were considered by the COS in January 1946.<sup>18</sup> The Chiefs approved the creation of a central combined operations training school and the retention of COSS, if possible in the Bideford area. However, in both cases the governing principle was that they be maintained at the minimum level necessary to keep combined operations technique alive and for experimental purposes.<sup>19</sup>

The RAW Committee had recommend the creation of a post-war Naval Assault Force. As early as September 1945 Laycock called for the Admiralty to submit definite proposals for the shape and size of this force.<sup>20</sup> The COS agreed that the JPS rather than the Admiralty should examine and report on this issue.<sup>21</sup> Accordingly, the JPS examined the requirement for post-war naval assault forces and submitted their report to the COS on 26 January 1946.<sup>22</sup> Keeping in line with the RAW Committee, the JPS did not consider that there was any peacetime operational requirement to maintain assault forces. They foresaw no need to carry out an opposed landing against entrenched opposition in any situation short of war. However, they considered it important that amphibious training and development of technique should continue in peacetime. Should amphibious forces be needed for Imperial policing duties then these forces could be drawn

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<sup>16</sup>. Folio 30, docket CR 251/45; DEFE 2/1315.

<sup>17</sup>. DEFE 2/1315. COS (45) 277 mtg, 28 November 1945; CAB 79/42.

<sup>18</sup>. COS (46) 5 mtg, 10 January 1946; CAB 79/43.

<sup>19</sup>. Ibid.

<sup>20</sup>. COS (45) 228, 22 September 1945, memo by CCO; CAB 80/50.

<sup>21</sup>. COS (45) 233 mtg, 25 September 1945; CAB 79/39.

<sup>22</sup>. JP (45) 259, *Post War Naval Assault Forces*, 26 January 1946; CAB 84/75.

## Chapter Two: Table Two

### JP(45)259 -Assault Training Force.

LSH(C)	-	1
LSI(L)	-	1
LST(3)	-	11 (including 2 LST(Q))
LST(A)	-	8
MS(LS)	-	1
MS(LC)	-	1
LSD	-	1
LCH	-	3
LCT(8)	-	12
LCI(L)	-	6
LCT(R)	-	6
LCA	-	115 (only 72 to be manned)
LCN	-	2
LCP(L)	-	44
LCM(7)	-	16
M/T Ship	-	1
Coaster	-	2
P/B Units	-	8

from those maintained for training. The JPS appreciated that financial and manpower considerations made it unlikely that their recommendations could be acted upon in the near future. They were recommending a force for the period when the armed forces had stabilised in their peacetime roles.

The JPS outlined a requirement for an Assault Training Force which was necessary to provide training facilities for all the services, beyond those which could be provided within CTEs and the schools. They considered that it was not possible to preserve the whole technique of amphibious warfare at anything below brigade group level. Consequently, they recommended an Assault Training Force able to carry 6,000 troops and 750 vehicles on the basis of a brigade group and a beach group carried on exercise at assault scales. This represented a considerable reduction on the divisional lift recommended by the RAW Committee. Nevertheless the force was still a considerable one, see table two. The total Naval and Marine manpower requirement for the Assault Training Force was 6,348 men.<sup>23</sup> Once the need for landing craft and ships for the CTEs and schools had been catered for the manpower requirement reached 10,214, enough men to man twelve *Town* class cruisers.<sup>24</sup>

The COS discussed the report in February. Andrew Cunningham was in general agreement with the report but considered the manpower requirement to be “*somewhat lavish*”. It was decided that in order to reduce the dollar expense of the force the requirement for lend-lease ships and craft would be restricted to one LSD and one LCH. It was also agreed to drop the requirement for the LSI(L), ostensibly because American developments in launching craft from LSTs put in doubt the requirement for this ship. With these provisos the Chiefs approved the Assault Training Force, as set out by the JPS as an “*ultimate target*”. However, Cunningham stated that it would probably take three or four years to reach this target.<sup>25</sup>

Facing severe economic difficulties following the Second World War, Prime Minister Attlee adopted the basic premise that economic needs would have to take priority over defence requirements. With no

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<sup>23</sup>. Ibid.

<sup>24</sup>. *Town* class cruisers had a complement of around 850 men.

<sup>25</sup>. COS (46) 18 mtg, 1 February 1946; CAB 79/44.

immediate threat the post-war structure of forces was to be driven by economic rather than strategic imperatives. Attlee informed the First Lord, A.V.Alexander, that *"it was not necessary in present circumstances to have a large fleet ready for instant action, as there was no one to fight"*.<sup>26</sup> Defence policy was to be founded on three assumptions: that Britain would not have to fight a major war for two or three years; that in any future conflict the USA would probably side with Britain and would certainly not combine against it; and that no fleet capable of endangering the security of the United Kingdom would exist for the next few years.<sup>27</sup> The Royal Navy was still the second largest navy in the world. The demise of German, Italian and Japanese seapower had removed the only serious threats to British sea control. Although dwarfed by the United States Navy (USN), the Royal Navy was considerably larger and more capable than any potential rival. At this time the threat posed by a growth in Soviet seapower was potential rather than immediate. In the early post-war period the Soviet Union did not possess a serious naval force and Soviet naval forces only rarely sortied from coastal operating areas.<sup>28</sup>

According to the COS Britain needed forces to provide for initial defence in war and a nucleus around which to mobilise the country's full resources. In addition, forces were required to meet security and occupational commitments overseas. The COS declared that:

The first task of the Armed Forces in war will be the defence of the United Kingdom, the main support areas and the communications between them. In addition to purely defensive forces this will call for the provision of certain offensive forces which will act as a deterrent to war breaking out and will limit the striking power of the enemy should it do so.

As a long warning period could not be relied upon, the minimum forces required to fulfil these roles would have to be maintained in peacetime.<sup>29</sup>

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<sup>26</sup>. Julian Lewis, **Changing Direction. British Military Planning for Post-War Strategic Defence, 1942-1947**, (London: The Sherwood Press, 1988) p.250.

<sup>27</sup>. Ibid. p.250-251.

<sup>28</sup>. Norman Polmar, **Soviet Naval Power. Challenge for the 1970s**, (New York: Crane, Russak and Co. Ltd, 1974) p.21-22.

<sup>29</sup>. COS (46) 307(o), 30 December 1946, note by the Minister of Defence; CAB 80/103.

In this climate the Royal Navy had to establish certain priorities. Cutbacks were required in all areas and only those projects considered vital by the Admiralty could expect its backing. In March 1946 the First Lord, A.V.Alexander, reported to Parliament that since VE Day 727 vessels ranging in size from “*fleet carrier downwards*” , had been cancelled.<sup>30</sup> Within the framework set by the COS the Admiralty saw its prime role as defence of the sea communications between the United Kingdom and “*the main support areas*”. In essence this was a return to the kind of duties it had undertaken during the War when the Navy’s greatest trial had been the battle against the U-boats. The Admiralty was more concerned with ensuring the safety of sea communications than with exploiting the deterrent value of more offensive uses of seapower. This was in spite of the fact that the COS had decided that no fleet capable of endangering the security of the United Kingdom would exist for a number of years.

The atomic bomb was not believed to have changed the fundamental importance of this role. According to Alexander:

Our experience in the last war demonstrated once more that if we ever neglected the security of our communications we should be at the mercy of any aggressor. He would have no need to incur the hazards of using the atomic bomb. He would simply, surely and swiftly destroy us by cutting our arteries at sea.<sup>31</sup>

This role had a familiarity about it with which the Navy and public alike could identify. It was traditionally one of the Navy’s core tasks. It called for a wide range of vessels including aircraft carriers, cruisers, destroyers and frigates. It did not, however, require landing craft. There was no precedent for the retention of large numbers of landing craft in peacetime. With resources scarce, a strong fresh case had to be made if these craft were to be retained.

Facing the need for defence cuts, in December 1946 the new 1SL Admiral Sir John Cunningham was questioned in the COS on possible reductions by the Admiralty. Combined Operations was only one of a number of areas he identified where cuts might be possible. Naval Aviation, coastal forces, fuel reserves and ships trials were all

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<sup>30</sup>. **Parliamentary Debates (Hansard)**, fifth series, volume 431 column 552.

<sup>31</sup>. *Ibid.*

identified as potential victims.<sup>32</sup> Like combined operations, none of these were central to the core task of defending the sea lanes. Cunningham pointed out that the reduction of Naval personnel, following the contraction of the Naval estimates, would have the effect of reducing the light fleet carrier establishment and would also result in the paying off of a submarine depot ship and nine submarines. He did, however, recommend particularly drastic cuts in the Combined Operations organisation. He suggested that it be reduced to an experimental basis and that the landing craft being maintained in reserve for the brigade lift should be scrapped.<sup>33</sup> Cunningham believed that this would create a manpower saving of some 4,500 officers and men. The landing craft base at Appledore could still be maintained and any landing craft required for Army exercises in the near future could be provided from there. An alternative course of action which the Admiralty was prepared to accept was the retention of sufficient ships, craft and personnel to accommodate a Commando brigade. This represented a saving of 18 ships, 52 major craft, 177 minor craft and some 1,500 officers and men on current requirements.<sup>34</sup>

Chief of the Imperial General Staff (CIGS), Field Marshal Montgomery, strongly opposed these proposals. In view of the unsettled state of world affairs, he supported the decision reached by the COS on 2 January 1946 to maintain the assault lift for an infantry brigade.<sup>35</sup> The issue was brought before the Minister of Defence, A.V. Alexander, who was inclined to support the Army in defence of Combined Operations. Aware of the need to present as strong a front as possible, despite the weakness of the British defence establishment, he noted the deterrent value of amphibious capabilities:

Combined Operations have been proved during the War to be a vital factor in modern war and to reduce them to an experimental basis, with the attendant publicity which would be given to such a decision, would be to weaken our position in the eyes of the world.<sup>36</sup>

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<sup>32</sup>. Between 1946 and 1953 the title *Naval Aviation* was substituted for the more familiar name, *Fleet Air Arm*.

<sup>33</sup>. COS (46) 190 mtg, 31 December 1946; CAB 79/54.

<sup>34</sup>. COS (47) 3 mtg, 3 January 1947; DEFE 4/1.

<sup>35</sup>. COS (46) 18 mtg.

<sup>36</sup>. COS (47) 5 mtg, 6 January 1947; DEFE 4/1.



The Admiralty remained on the offensive. Accepting that amphibious warfare would remain important to the three Services, Cunningham resurrected the idea of replacing the central organisation with an inter-Service committee. The 1SL claimed that COHQ's status as an independent organisation tended to confine inter-Service cooperation on combined operational matters to that actually conducted by COHQ itself. He claimed that its existence militated against the growth of full and direct cooperation between the three Services in this area, and he proposed to replace COHQ with a two-fold organisation. A joint Inter-Service Combined Operations Planning Staff would be set up within the COS organisation. Each senior member of this planning staff would be responsible for co-ordinating all combined operations activities within his own department and act as a link with other Service departments. In addition a combined operations school was required, whose activities would be extended to include the study and development of the technique of combined operations.<sup>37</sup>

Laycock was unimpressed by this suggestion. He pointed out that it was not a question of organisation, but rather a case of limited finance that prevented more fruitful co-operation in the sphere of combined operations.<sup>38</sup> Within COHQ the Admiralty was denounced for persistently plotting against Combined Operations. The suggestion that COHQ was responsible for limiting inter-Service co-operation was rejected:

They produce no evidence to support this charge; we know that the only foundation lies in the persistence with which the Admiralty have not merely refused to play, but have been actively anti-playing. Examples of this are that they seldom send proper representatives to meetings, and those who do come are never empowered with any authority.<sup>39</sup>

The feeling within COHQ was that the Admiralty was trying to sabotage what it saw as a nuisance organisation which would draw funds away from the fleet.

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<sup>37</sup>. COS (47) 55(o), 14 March 1947, memo by the 1SL; DEFE 5/3.

<sup>38</sup>. COS (47) 48 mtg, 2 April 1947; DEFE 4/3.

<sup>39</sup>, Memo of 29 July 1946 by the Director of Combined Operations (Air) L.K.Barnes, folio 2; DEFE 2/1647.

The Army remained keen on amphibious warfare and supported COHQ against the Admiralty. The Army and Air Force did not equally share the burden that amphibious warfare placed on the Navy. Montgomery, supported by Chief of the Air Staff (CAS) Tedder, rejected the Admiralty proposals. Outnumbered by his COS colleagues, Cunningham was forced to accept that for the time being COHQ should continue to be responsible for policy, training and technique of combined operations under the general direction of the COS.<sup>40</sup> General Hollis, secretary to the COS Committee, noted that the Admiralty “*complained bitterly*” that the lion’s share of the cost of Combined Operations fell to them while the War Office were the principle users.<sup>41</sup>

Army interest in amphibious warfare was demonstrated in May 1947 when Montgomery initiated Exercise *Spearhead* at Camberley. The object of the exercise was :

To study the technique of opposed landing at the end of a long sea voyage carried out by British land forces mounted in the United Kingdom.<sup>42</sup>

The exercise was organised for the benefit of senior officers from the three Services and included representatives from the Dominions and the United States. The officer in charge of preparing the exercise was General Sir John Crocker. Crocker had commanded 1 British Corps at Normandy. Exercise *Spearhead* shows how clearly the experience of the last war affected thinking about future combined operations. The war setting was 1949 and dealt with an invasion of the Italian mainland by British forces. The enemy was taken to be the Axis forces of World War Two. The Pacific technique employed by the Americans in their conquest of isolated island strongholds was specifically ruled out as unsuitable for European conditions and the type of assault studied was modelled on the European landings of 1943 and 1944. The need for the maximum degree of surprise was stressed. Air support was to be provided by land based aircraft. The enemy was assumed to have a supply of atomic bombs, of which it might be able to spare four or five for use against an amphibious assault. The exercise concluded that although atomic weapons could

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<sup>40</sup>. COS (47) 48 mtg.

<sup>41</sup>. Folio 534; DEFE 11/276.

<sup>42</sup>. WO 216/202, War Office Exercise *Spearhead*.

have potentially devastating results, the danger could be overcome by employing flexibility and dispersion to the maximum possible degree and by maintaining air superiority.<sup>43</sup>

It is hardly surprising that only three years after D-Day the Services should plan the major assaults of the future along the lines of those which had recently proven so successful. During 1946 COHQ undertook a major evaluation of combined operations: the "*Study of the Conduct of Future Combined Operations*". The object of this study was to examine the lessons of the 1939-1945 war and then make recommendations for an assault technique upon which training could be based and development work could proceed. The study centred around the problem of landing a military force of one infantry division and an armoured brigade with the associated naval and air forces in support.<sup>44</sup> While the effort to study the last war and to avoid making the same mistakes again was commendable, their immediate relevance to Britain in the late 1940s was limited. It was already clear that the Admiralty would find great difficulty maintaining sufficient lift for one brigade group during peacetime, let alone an entire division. Neither *Spearhead* nor the COHQ study addressed the issue of amphibious landings in emergencies short of war. They reflected the extent to which amphibious warfare was viewed in terms of large scale assaults in a major war on the basis of previous experience of similar operations in Europe.

At this time amphibious warfare was still viewed as a means of allowing Britain to return to a Continental campaign after the Army had been forced from the European mainland by superior enemy force. Unable to match the Soviet army in Europe, before the establishment of NATO in 1949 both Britain and the United States planned to evacuate their occupation forces from Germany to the United Kingdom and the Mediterranean if attacked on the Continent. They then intended to build up strength prior to a return to Europe, while allied air forces conducted a major bombing campaign. In essence this was a return to the strategy employed by Britain in

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<sup>43</sup>. WO 216/202. Copy also held at the Mountbatten archives, University of Southampton; MBI/N79.

<sup>44</sup>. *Study of the Conduct of Future Combined Operations*; DEFE 2/1727.

1940.<sup>45</sup> Amphibious warfare was a means of returning the Army to a Continental campaign where it would become Britain's main war effort.

In his final address to Exercise *Spearhead* Montgomery called for maintenance in peacetime of sufficient craft to lift a brigade group. He forcefully re-affirmed his commitment to combined operations:

The Army considers that the torch of Combined Operations must be kept alight; it will back the Combined Operations HQ one hundred per cent, and will play its full part in ensuring an efficient organisation for training and development.<sup>46</sup>

Montgomery believed that it was essential that sufficient ships and craft to lift a brigade group should be available on the outbreak of war. In addition, he considered that it was important to keep available in peacetime enough craft to train forces in the use of all types of assault and support craft. With the support of Laycock, he pushed these requirements in the COS Committee. Neither Tedder nor Vice-Admiral Rhoderick McGrigor (speaking for the 1SL) could foresee any requirement for large scale assault landings in the early stages of a war. However, both agreed to accept Montgomery's proposal for planning purposes. Thus on 4 June 1947 the COS accepted that provision should be made for a brigade group lift with its full complement of supporting arms and craft to be made available immediately on the outbreak of war.<sup>47</sup> As was the case with the Assault Training Force agreed in January 1946, this did not actually commit the Navy to any action and McGrigor was on record as calling the brigade group lift an "*ideal requirement*" that was "*unrealistic*"<sup>48</sup>

In January 1946 Laycock had been asked to explore the possibility of setting up CTEs in Europe and the Middle East in 1947.<sup>49</sup> According to COHQ the object of a CTE was: to run courses for individual

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<sup>45</sup>. Michael Dockrill, *British Defence Since 1945*, (Oxford: Basil Blackwell Ltd, 1988) p.32. C.J.; Bartlett, *The Long Retreat: A Short History of British Defence Policy 1945-1970*, (London: Macmillan, 1972) chapter two.

<sup>46</sup>. WO 216/202.

<sup>47</sup>. COS (47) 70 mtg, 4 June 1947; DEFE 4/4.

<sup>48</sup>. Ibid.

<sup>49</sup>. COS (46) 18 mtg.

officers and NCOs from the three Services who would then act as instructors in their own units; to train beach groups and other specialist beach organisations; and to assist units in combined operations training at battalion level and to help in running large scale exercises in conjunction with the Assault Training Force.<sup>50</sup> The requirement for landing craft to serve the CTEs could be divided into two stages. For the individual training of officers and NCOs only small nucleus flotillas were required, consisting of one LCT, six LCA, and two LCM.<sup>51</sup> It was hoped these could be set up in 1947 to coincide with the anticipated opening of the CTEs. For unit training a mobile flotilla would be formed in 1948 and would rotate between the CTEs. This mobile flotilla of four LST(A), two LCT(8), one LCH, and 18 LCA would be available as an operational reserve in an emergency.<sup>52</sup> The Admiralty, however, were reluctant to commit themselves to the provision of manpower for combined operations. In October 1946 they announced that the Assault Training Force would not be manned before 1952. They hoped to be able to provide manpower for one CTE in 1949 and for another in 1952 but made no firm commitment.<sup>53</sup>

The search for suitable sites for European and Mediterranean CTEs resulted in the selection of Eckernforde on the Baltic coast of Germany and of Famagusta in Cyprus. These CTEs were to be constructed at a cost of £49,000 and £346,000 respectively. The original estimated cost of £1,000,000 for the European CTE was substantially reduced by the decision to convert existing torpedo depots. The CTEs at Eckernforde and Famagusta were to be established in 1947 and 1948 respectively. However, financial and manpower difficulties forced the postponement and then cancellation of both projects. Early proposals for a CTE in India or the Far East were not taken up.<sup>54</sup>

Following Exercise *Spearhead*, in June 1947 Laycock recirculated a paper first submitted to the COS in March 1947. The paper, entitled "*An Appreciation of our Capabilities and a Review of Our*

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<sup>50</sup>. Folio 10, docket CO.128/47; DEFE 2/1471. COS (46) 164 mtg, 18 November 1946; CAB 79/53.

<sup>51</sup>. In addition a LCT(E) was required for the Mediterranean CTE.

<sup>52</sup>. COS (46) 164 mtg.

<sup>53</sup>. COS (46) 241, 24 October 1946, memo by 1SL; CAB 80/55. DEFE 2/1471.

<sup>54</sup>. DEFE 2/1262, DEFE 11/276, DEFE 2/1654.

*Requirements in Combined Operations*” , outlined his hopes for the future of Combined Operations.<sup>55</sup> Questioning whether a sufficient proportion of the national vote was being spent on combined operations, Laycock noted that the current provision of landing ships and craft was inadequate and called for the construction of new LST and LCT. Laycock accepted that an Assault Training Force on the scale approved in 1946 was beyond the Admiralty’s resources. Nevertheless, he believed that a reduced amphibious force was required to conduct effective training and called for this to be made available in 1949 and not in 1952 as the Admiralty wanted.

Laycock assumed that there was a requirement to maintain an operational assault force in peacetime. He proposed a Naval Assault Operational Force capable of carrying 6,000 men and 750 vehicles, see table three.

**Table Three: Naval Assault Operational Force**

	<b>No.Required</b>	<b>No.available in commission</b>	<b>Remarks</b>
LSH(C)	1	-	Ship to be converted.
LST(3)	6	3	Balance in reserve.
LST(A)	15	-	To be converted from LST(3)
LSD	1	-	To be built.
LCH	3	1	2 to be built.
LCT(8)	12	4	Balance in reserve.
LCM(7)	12	-	12 in reserve and 18 commissioned for training.
LCA	120	-	120 in reserve and 23 commissioned for training.
LCN	2	-	To be built.
LCP(L)	2	-	36 in reserve and 8 commissioned for training.
M/T Ship	1	-	To be taken when needed.
Coasters	2	-	To be taken when needed.
P/B Units	8	-	In reserve but requiring extensive refit.

This force required the construction of an LSD and two LCH, conversion of 15 LST(3) to LST(A) and of the ship *Keren* to LSH.

<sup>55</sup>. COS (47) 129(o), *An Appreciation of our Capabilities and a Review of Our Requirements in Combined Operations*, 14 June 1947; DEFE 5/4.

To expect the Navy to accept this programme in the existing financial climate was hopelessly overoptimistic. Before the force could be made ready, Laycock suggested that as a temporary measure the Army accept one battalion assault loaded and the remainder of the Brigade group carried in whatever White and Red Ensign shipping that was available.<sup>56</sup>

If Laycock's proposals for future combined operations requirements were far too grand for the existing financial climate, his suggestions for how to fund his proposals were equally unrealistic. Noting the current dearth of resources, he outlined three possible courses of action. Firstly, one could simply accept the present low ebb of amphibious potential. Alternatively, one could ask the Army to accept a greater burden of the responsibility for Combined Operations by reallocating money and manpower from the Army estimates to the Admiralty in order to help it to meet the requirements of the Army for Combined Operations. Laycock's final suggestion was that the Navy could accept the risk of a reduction in its ability to retain control of the seas and in this way reallocate funds to Combined Operations.<sup>57</sup>

The latter suggestion was not likely to find favour with the Navy, although the idea was not as unreasonable as it might at first seem. It had been agreed by the COS that the United States would never allow Britain to be isolated in a future war.<sup>58</sup> The only feasible threat to Britain's control of the sea lanes came from the Soviet fleet. Despite the rundown of the Royal Navy there was still little realistic prospect of enemy surface raiders challenging British command of the sea. The Soviet Navy had been somewhat neglected and any indications that this was about to change could not alter its immediate inferiority in major surface vessels. There could be little doubt that the combined Anglo-American navies could counter any Soviet threat. However, Laycock's suggestion cut across the accepted wisdom of generations and entirely ignored the Navy's post-war preoccupation with control of the sea lanes and the increasing emphasis being placed on anti-submarine forces. The Admiralty were determined not to run the risk of losing sea control in any future war. As a result

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<sup>56</sup>. Ibid.

<sup>57</sup>. Ibid.

<sup>58</sup>. COS (47) 70 mtg, 4 June 1947; DEFE 4/4.

manpower and resources were concentrated on the ships required to maintain sea control and other less immediate tasks, such as amphibious warfare, were given lower priority.

In March 1947 the Admiralty had written to all Naval Commanders-in-Chief and also to CCO to comment on an additional cut of 9,500 in naval personnel. It was clearly stated that every endeavour would be taken to ensure that this did not interfere with Naval Aviation or lead to a reduction in the seagoing fleets. Consequently “*virtually the whole of it will have to be borne by a further contraction of technical training establishments, schools and base staffs both at home and abroad*” .<sup>59</sup> Commenting on Laycock’s overall proposals a memorandum by the Admiralty described the suggestion as “*basically unsound and utterly inadmissible*” , going on to add:

Nothing could be more unsound than to risk our ability to gain and maintain control of sea communications, by which alone can the movement of our fighting forces to the points where they can be most effectively used be ensured, in order to provide the actual means, i.e. the ships and craft, of carrying out these movements.<sup>60</sup>

This was classic maritime strategy. The above passage could almost be a direct quote from Mahan. As an Army officer Laycock may have under-estimated the strength of feeling within the Navy on this issue.

The proposals to re-allocate manpower from the Army were rejected as missing the point. The Royal Navy’s manpower was restricted by the rate of intake of regulars counter-balanced by the number of trained National Servicemen due to be released. Naval manpower was thus governed by the recruitment of Naval regulars and was set to decline during 1947-1950. During the low ebb of 1948-1950 it would be impossible to allocate more than 4,600 trained men to Combined Operations. In any case, according to the Admiralty, the Assault Training Force could not be manned before 1952 at the earliest, and it still remained only an “*ultimate target*” . Certainly no “*Operational Assault Force*” existed as yet. Therefore, the Admiralty asserted, the

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<sup>59</sup>. Folio 26, docket CO 824/48; DEFE 2/1695.

<sup>60</sup>. COS (47) 157(o), 6 August 1947, memo by Admiralty; DEFE 5/5.



compromise solution suggestion by Laycock (now styled Chief of Combined Operations Staff (COCOS)) would have to be accepted.<sup>61</sup>

The COS approved the creation of a School of Combined Operations (SCO) in January 1946. Based at Fremington, near Bideford, the School was to study the principles, tactics and technique of Combined Operations and to teach these to senior and staff officers of all three Services.<sup>62</sup> The first commandant of the SCO was Brigadier Wildman-Lushington (RM) and the first course began on 19 August 1946. In addition to teaching British officers the school also taught allied and Dominion forces. In August 1949 a Foreign Officers Course was attended by 22 officers from ten different countries. As well as teaching at Fremington the School sent teams to teach at Staff Colleges in Britain and overseas and was to establish a close liaison with its American counterpart at Quantico.<sup>63</sup>

An Amphibious School, Royal Marines was formed following the closure of the minor landing craft base at HMS *Rosneath* in 1948. Minor landing craft training was moved to the Portsmouth area and came under the control of Major General, Royal Marines Portsmouth. The Amphibious School was formed to incorporate this training and to absorb a small number of inter-Service Combined Operations units, which had been so reduced in strength that they could no longer administer themselves. The School was organised into a headquarters and three functional wings: the Minor Landing Craft Wing, the Beach Wing, and the Small Raids Wing. Each wing was responsible for training personnel in its own particular field. Commando training was conducted at the Commando School, Royal Marines after the completion of basic infantry training.<sup>64</sup>

At a meeting held within COHQ on 19 January the Services agreed to the creation of a Combined Signal School in order to keep alive the communications technique in combined operations.<sup>65</sup> The Combined Signal School (CSS) was established at Fremington in late 1946. In the directive to its commandant the object of the CSS was defined as

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<sup>61</sup>. Ibid.

<sup>62</sup>. COS (46) 5 mtg, 10 January 1946; CAB 79/43.

<sup>63</sup>. See DEFE 2/1452. DEFE 2/1561, DEFE 2/1739, DEFE 2/1579.

<sup>64</sup>. Folio 22+27, docket CO 793/34; DEFE 2/1619.

<sup>65</sup>. Folio 3, docket CO 1062/46; DEFE 2/1745.

*“to ensure continuity in the development of inter-Service signal technique, and training for combined operations”*. The CSS’s responsibilities included the provision of instruction and demonstrations for students at the SCO, including the operation of a dummy LSH. The CSS was responsible for training all specialist beach signal units and a limited number of signal personnel from the three Services. It was to act as parent and holding unit for Army and RAF signal personnel assigned to Combined Operations and was to encourage the development of signal technique and equipment.<sup>66</sup>

COXE was set up in the Westward Ho area in August 1942 to carry out trials and experiments with combined operations equipment.<sup>67</sup> In line with the recommendations of the RAW Committee, COXE was maintained in its original site after the war. The commandant was responsible to CCO via the Director of Combined Operations (Naval) at COHQ. In addition to advising CCO on the details of staff requirements for all types of equipment appropriate to the amphibious assault and the disembarkation of Army and RAF equipment, COXE was *“to carry out investigations, experiments and trials as directed, on all combined operations problems in connection with the assault, follow up and build up”*.<sup>68</sup>

COXE remained based at Westward Ho, ten miles away from the CSS and SCO at Fremington, until 1949. In May 1948 COHQ recommended to the Ministry of Defence that in order to obtain economical administration and efficient control and also to reduce land requirements to a minimum, the Combined Operations establishments should be concentrated at Fremington. The proposed regrouping was approved by the War Office as it would result in economies and release requisitioned properties.<sup>69</sup> Accordingly, COXE headquarters was moved from Torridge House, Westward Ho to Fremington. The transfer was completed on 10 May 1949. The workshops and stores of COXE remained at Westward Ho, although Service accommodation followed the headquarters and moved to Fremington. The grouping of CSS, SCO and COXE was given the title Combined Operations Centre, North Devon and was under the

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<sup>66</sup>. *The Combined Signal School Standing Orders*, 20 February 1947, docket CO 947/48; DEFE 2/1680.

<sup>67</sup>. See chapter one, page 35.

<sup>68</sup>. Folio 3A, docket CO 488/49; DEFE 2/1644.

<sup>69</sup>. Note from the Secretary of State for War to COHQ, 15 June 1948, folio 91; DEFE 2/1563.

command of COCOS via Commandant, Combined Operations Centre, North Devon.<sup>70</sup>

The possibility of taking the opportunity of changing the title “*combined operations*” to “*amphibious warfare*” was raised but rejected. It was noted that this might cause confusion as in American usage the term “*amphibious*” had a narrower definition than the British “*combined operations*” and that until this difference was removed it would be premature to change a well recognised name. COCOS also noted that such a change would have to be brought before the COS and he was reluctant to bring unwarranted attention on his command at a time when the Chiefs were desperate to reduce expenditure.<sup>71</sup> The term “*combined operations*” continued in use until February 1951 when “*amphibious warfare*” was finally substituted in order to standardise nomenclature with the USA and Canada.<sup>72</sup> Henceforth, COCOS was styled Chief of Amphibious Warfare (CAW), COHQ changed title to Amphibious Warfare Headquarters (AWHQ), SCO became the School of Amphibious Warfare (SAW), CSS became the Amphibious Warfare Signal School (AWSS) and COXE became the Amphibious Warfare Experimental Establishment (AWXE).

By the summer of 1947 Britain’s worsening economic position forced the Minister of Defence, A.V.Alexander, to order the COS to undertake a complete review of the post-war organisation of forces. Central to this re-examination was the fact that a ceiling of £600 million was to be established for an indefinite period. Pointing to the need for an economic and industrial recovery Alexander argued that a balance had to be achieved between the danger of appearing too weak, and thereby encouraging aggression, and the possibility that by spending too much on the armed forces, the “*whole structure of our economy might collapse*” .<sup>73</sup> In addition to the £600 million spending limit Alexander imposed two further constraints on the COS:

1.It must be accepted that the risk of a major war is ruled out during the next five years, and that the risk

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<sup>70</sup>. DEFE 2/1563, DEFE 2/1564, DEFE 2/1565.

<sup>71</sup>. Docket CO 561/1/50; in DEFE 2/1565.

<sup>72</sup>. COS (51) 47, 1 February 1951, note by the War Office; DEFE 5/57. COS (51) 28 mtg, 9 February 1951; DEFE 4/40.

<sup>73</sup>. COS (47) 105 mtg, 19 August 1947; DEFE 2/1438,

will increase only gradually during the following five years. This risk will vary with our visible offensive strength. If attacked we must fight with what we have.

2. It must be accepted that the financial limit imposed may prevent us having the defence forces hitherto considered necessary on the outbreak of war. It will therefore be necessary to build up only the forces which give us the best chance of survival, and to avoid dissipating our resources. This will mean taking serious risks.<sup>74</sup>

There were four principles which were to govern the composition of British forces:

1. Priority should be given to forces in peace which gave the best visible show of strength and thus have the best deterrent value.

2. Long term research and development should have priority in expenditure.

3. Provision must be made for minimum forces necessary for essential overseas garrisons and stations.

4. No additional provision should be made for forces for the United Nations.<sup>75</sup>

A strong seaborne striking force based around powerful amphibious forces and supported by aircraft carriers could have provided just such a visible show of strength. However, the emphasis on long term research and development and the decision to provide only minimum forces for overseas garrisons and no additional forces for UN operations undermined the need for amphibious intervention capabilities. For the Admiralty the major naval priority was to be defence of Britain's sea communications against submarine and air attack. Other naval tasks, such as combined operations, could be downgraded since they would not be required in the early stages of a war.<sup>76</sup> The Navy sought to base its re-assessment on the necessity of providing essential foreign stations commitments, proper training, and a nucleus to expand at the outbreak of war.<sup>77</sup> In order to help the Navy achieve cuts totalling £13,750,000 drastic cuts were suggested for Combined Operations. Alongside reductions in other areas, in September 1947 the 1SL proposed, "*to maintain a comparatively small cadre in order to keep alive the art of Combined Operations*", The

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<sup>74</sup>. COS (47) 173(o), 23 August 1947; DEFE 2/1438.

<sup>75</sup>. Ibid.

<sup>76</sup>. Grove, *Vanguard to Trident*, p.32-33.

<sup>77</sup>. COS (47) 166(o), 13 August 1947, memo by the Admiralty; DEFE 5/5.

reduction he envisaged, *“would render it impossible to stage combined operations for several years, or even to land and maintain the smallest force over beaches”*.<sup>78</sup>

The Navy was not being unreasonably obstructive. The rundown in the operational strength of the fleet in 1947 had been startling. By December a combination of economic crisis and manpower problems had reduced the Home Fleet to one light cruiser, a few destroyers, frigates and submarines.<sup>79</sup> The manpower provision for Combined Operations was cut from 4000 in July 1946 to a temporary low of 1,000, 600 short of the accepted bare minimum necessary to meet training and other commitments.<sup>80</sup> As a further cost cutting measure Cunningham suggested moving the Combined Operations establishments in North Devon to the Portsmouth area, to be housed in existing Service accommodation. He requested an inter-Service committee to examine the issue.<sup>81</sup>

The possibility of a limited move to Portsmouth had been raised within COHQ in 1947. It was suggested that COXE would profit from being nearer dockyard facilities, the main naval and military trials and development organisations and the major centres of Service activity in general. The proposals came to nothing. It was considered that COXE was better off close to the SCO at Fremington and the excellent beach conditions in the Bideford area.<sup>82</sup> COCOS was equally opposed to the move of the SCO and CSS, believing that accommodation difficulties, beach conditions and the inability to expand the site in wartime ruled out Portsmouth.<sup>83</sup> The Principle Administrative Officers' Committee were invited by the COS to investigate the 1SL's proposal. The resulting report recommended that the schools and COXE remain at Fremington as the move to Portsmouth could only take place if fresh construction was undertaken. It was not considered that such construction was justified.<sup>84</sup>

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<sup>78</sup>. COS (47) 184(o), 1 September 1947; DEFE 5/5.

<sup>79</sup>. Grove, *Vanguard to Trident*, p.37.

<sup>80</sup>. COS (48) 5(o), 5 January 1948, memo by Admiralty; DEFE 5/10. COS (48) 13(o), 18 January 1948, memo by COCOS; DEFE 5/10. COS (48) 10 mtg, 20 January 1948; DEFE 4/10.

<sup>81</sup>. COS (48) 5(o).

<sup>82</sup>. Docket CO 245/47; DEFE 2/1564.

<sup>83</sup>. COS (48) 32, 30 March 1948; memo by COCOS; in DEFE 5/7.

<sup>84</sup>. COS (48) 47 mtg, 2 April 1948; DEFE 2/1562.

In the aftermath of the 1947 convertibility crisis Britain's economic position was dire. The Treasury continued to press the armed forces for cuts which the Services were equally determined to resist. In December 1947 Alexander was forced to strengthen the new ten year rule. It had to be accepted that there was no risk of war before 1952, and then a gradually increased risk through to 1957.<sup>85</sup> Forces were to be maintained at the minimum possible level consistent with providing for the bare essentials and the best possible show of deterrent strength. According to Eric Grove the ten year rule was in fact driven as much by strategic analysis as economic pressure and it had a generally beneficial effect on strategic planning before it was abandoned during the Korean re-armament.<sup>86</sup> Whether or not this is the case is beyond the scope of this study. However, the rule was to have a deleterious effect on a Combined Operations organisation seen as a luxury by a Navy desperate to reduce expenditure.

The COS appointed a working party under Admiral E.G. Harwood in December 1948 to draft proposals for ministers based on annual defence expenditure of £700 million from April 1950. The resulting Report of the Inter-Service Working Party on Size and Shape of the Armed Forces (Harwood Report) was submitted in February 1949. Based on the assumptions embodied in the "*ten year rule*", the report sought to assess the best forces that could be provided within the defence ceiling, rather than to calculate the forces necessary to support a given policy. The results were predictably hard on the Services. The Report proclaimed that "*Our aim must be to produce compact, well-equipped modern forces rather than larger, obsolescent forces living beyond their means*".<sup>87</sup>

Under the Harwood scheme the Royal Navy was to receive the smallest individual share of finance. The working party recommended annual Naval estimates of around £166 million a year, requiring a drastic reshaping of the Navy. Naval manpower was to be cut down to 90,000 in 1952-53 from a proposed 120,000 in 1950. The stress was to be on a carrier and small ship force devoted in

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<sup>85</sup>. COS (47) 263(o), 11 December 1947, report by the Minister of Defence; DEFE 5/6.

<sup>86</sup>. Eric Grove, "The Post War *Ten Year Rule* - Myth and Reality" in *RUSI Journal*, Vol.129 No.4, December 1984, p.48-53.

<sup>87</sup>. Misc/P(49)6. 28 February 1949, **Report of Inter-Service Working Party on Size and Shape of the Armed Forces**. Folio 1 docket CO(o)7/49 (special folder); DEFE 2/1440.

wartime to the protection of Britain's sea communications. It was assumed that the United States would be at war with Russia practically simultaneously with Britain and that the allies would possess a substantial naval preponderance. It was therefore concluded that Britain should seek to complement the American capability rather than merely add to the areas where the two nations were already dominant.

Harwood saw little place for Combined Operations in his peacetime force structure. The working party identified a need to be prepared to mount small scale raids of up to 300 men on an enemy held coastline and to continue training in clandestine operations. Research and development of raiding and clandestine activities were also to continue, as was the study of the technique of larger operations, relying where necessary on American help. In view of this reduced role it was proposed to cut the existing organisation. Although the schools were to be retained the working party recommended replacing COHQ with a sub-committee of the COS under the Minister of Defence. A small inter-Service permanent staff would also be necessary.

The report went further. It suggested that the Navy could not afford to support the Royal Marine Commandos who performed an Army role in peace. It was therefore recommended that the Commandos should be abolished and the Royal Marine Corps disbanded, or retained as a regiment within the Army. The 1SL reacted strongly to this suggestion, stating plainly that it was unacceptable.<sup>88</sup> COCOS was equally firm in the defence of his organisation, reporting to the COS that implementation of the Harwood proposals would mean that Britain would be no better prepared for combined operations in the next war than it had been in the last one. He felt justified in pointing out that the current Combined Operations organisation cost the country less than £1,000,000 a year. Existing manpower was only 1,100 (mainly naval) out of a total eventual naval strength of 90,000. It was, he believed, a modest price to pay for keeping alive the ability to deploy fighting forces across the sea.<sup>89</sup>

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<sup>88</sup>. COS (49) 143, 23 April 1949, memo by the 1SL; DEFE 5/4.

<sup>89</sup>. COS (49) 144, 23 April 1949, memo by COCOS; DEFE 2/1440.

Eric Grove has written that the COS were secretly delighted with the Harwood proposals as they enabled them to highlight to their political masters the dire results that would be associated with the £700 million defence ceiling.<sup>90</sup> Certainly it is true that the COS reported to the Cabinet Defence Committee that the Harwood Report, though a “*valuable analysis*”, was unacceptable. The report, they claimed, proved that £700 million was an inadequate sum to carry out foreign and colonial policy in peace and the requirements of strategy in war. It was noted that the Harwood proposals for Combined Operations would result in an inability to take effective amphibious action in force in the early part of a war.<sup>91</sup> The Chiefs were supported in their opposition to Harwood by the Minister of Defence and consequently it was decided in July 1949 to set up another working party, this time under Sir Harold Parker, the permanent secretary at the Ministry of Defence. The Harwood Report was dropped.<sup>92</sup>

Combined Operations did not get much of a respite. Facing the need for further economies the Admiralty once again attacked COHQ. In July 1949 the 1SL, Lord Fraser of North Cape, proposed an assault lift sufficient for a brigade group for the war fleet of 1957, one third of a brigade lift for the peacetime fleet, with the remaining two thirds in Category C reserve (i.e. at more than three months notice). COHQ would be abolished and the control of training vested in the Army for the shore side, and the Navy for the sea side, through a sub-committee of the COS.<sup>93</sup>

The requirement for the provision of sufficient lift for a brigade group with supporting arms at the start of war had been agreed in June 1947. However, this had only been accepted as an ideal target for planning purposes, and then only reluctantly by the Navy. The Admiralty had conveyed their view to COHQ that the brigade lift was only a “*yardstick*”.<sup>94</sup> To them the requirement was for the maintenance of sufficient ships and craft to lift a brigade group, although not at assault scales. COCOS Wildman-Lushington was dismayed by this opinion, fervently believing in the need to maintain

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<sup>90</sup>. Grove, *Vanguard to Trident*, p.49.

<sup>91</sup>. COS (49) 214, 16 June 1949, report by the COS; DEFE 2/1440.

<sup>92</sup>. Grove, *Vanguard to Trident*, p.50-51.

<sup>93</sup>. COS (49) 236, 15 July 1949, memo by the 1SL; DEFE 5/25.

<sup>94</sup>. Folio 12, docket CO 1553/49; DEFE 2/1705.



the ability to conduct brigade group operations at the outset of war.<sup>95</sup> In April 1949 he had reported to the COS that destruction of this lift “*would virtually deny us power to develop any offensive amphibious operations in force for the first two years of a war*” .<sup>96</sup> He accepted that the maintenance of the ships and craft necessary to lift a balanced force of approximately one third of a brigade group represented a valuable training unit. Nevertheless, he pointed out, such a force bore no resemblance to any recognised military fighting formation and for operational purposes was inadequate for amphibious operations, other than token assaults on neutral island territories.<sup>97</sup>

As part of the continuing review of the defence establishment, on 12 August 1949 the Minister of Defence approved the setting up of an inter-Service committee to review Combined Operations. The committee, appointed under the Chair of Air Commodore F.W.Long, was established with the following terms of reference:

To review the headquarters and other Combined Operations establishments and to recommend what changes should be made and how reductions in the present cost can best be achieved.<sup>98</sup>

Taking into account the report of the RAW Committee and the need to maintain an effective liaison with the United States, the Long Committee were satisfied that the duties of COHQ could not be effectively discharged by an inter-Service committee within the COS organisation. COHQ was to remain in London along existing lines but was to be drastically reduced and to transfer many duties to the establishments at Fremington. It was suggested that COHQ effect a reduction of officers from 40 to 13 and achieve a 50 per cent reduction in civilian staff and other ranks which would yield a total saving of about £48,000 a year. Reductions and reorganisation at Fremington could yield a further saving of between £5,000 and £6,000. The committee strongly recommended the retention of sufficient amphibious lift for a brigade group.<sup>99</sup>

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<sup>95</sup>. Folio 4, docket CO 1648/49; DEFE 2/1721.

<sup>96</sup>. COS (49) 144, 23 April 1949, memo by COCOS; DEFE 2/1710.

<sup>97</sup>. Folio 3, docket CO(o) 1639/49; DEFE 2/1710.

<sup>98</sup>. COS (49) 336, 11 October 1949; DEFE 5/17.

<sup>99</sup>. Ibid.

While discussing the Report of the Long Committee, Lord Fraser expressed the opinion that COHQ should be placed under the command of the Commandant General, Royal Marines (CGRM).<sup>100</sup> The Commandos were already a Royal Marine responsibility, as was the Amphibious School, Royal Marines at Eastney. According to Fraser:

By dove-tailing the staff of the Royal Marine Office and COHQ it should be possible to effect an overall reduction in staff, and also prevent any overlapping between the Combined Operations School at Fremington and the Amphibious School.

At this stage he believed that the post of COCOS could not be merged with that of the CGRM as the work load of the latter was already very heavy. Fraser suggested that previous objections, based upon the fact that COHQ was an inter-Service responsibility and under such a system would lose its direct links to the COS and Minister of Defence, could be overcome by giving COCOS the right to approach the COS on matters of policy.<sup>101</sup>

Fraser submitted detailed proposals to the COS on 9 March 1950.<sup>102</sup> He now advocated vesting primary responsibility for amphibious warfare with the Royal Marines. CGRM would be given the additional title of COCOS, in which capacity he would be adviser to the COS on amphibious warfare. His directive would be issued by the Admiralty after approval by the COS and Minister of Defence. Royal Marine Headquarters would be re-organised as a tri-Service headquarters with an Army officer acting as Chief of Staff (Combined Operations). The Admiralty would continue to be responsible for the Royal Marines and thus for Combined Operations. Details of the financial provision for Combined Operations would be given in the Navy estimates and these would not be varied without the concurrence of the Minister of Defence. Fraser believed that his proposals would bring an overall manpower saving of 110 Service personnel and 20 civilians plus a financial saving of £70,000 per annum. In addition to these considerations, the Admiralty favoured the proposals as they promised to “*clean up*” responsibility for amphibious warfare and

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<sup>100</sup>. COS (49) 182 mtg, 8 December 1949; DEFE 4/27.

<sup>101</sup>. Ibid.

<sup>102</sup>. COS (50) 87, 9 March 1950, memo by 1SL; DEFE 11/277.

would broaden the outlook of the Marine Corps by more fully integrating them with the Army and Air Force.

Both the Long Report and Admiral Fraser's proposals were considered at a COS meeting on 22 March 1950. Wildman-Lushington outlined his opposition to the Long Report. He believed that the proposed cuts went too far and were based on unsound principles, namely that COHQ should transfer the bulk of policy to Fremington. He had several objections to Fraser's proposals. Despite the safeguards the CGRM and his Marine and Naval staff would still owe primary allegiance to the Admiralty. He was concerned that insufficient attention would be devoted to combined operations, unless the organisation was independent of any one Service. He also doubted that the Royal Marines had sufficient experience in the full range of issues to undertake the responsibility for combined operations. COCOS disputed the Admiralty claims that £70,000 could be saved by the proposed integration of staffs, pointing out that this saving included cuts in Royal Marines headquarters which would go ahead whether or not the merger with COHQ was undertaken. In reality the reductions suggested by Fraser would be in the order of only £22,000.<sup>103</sup>

Far from being supported by the CAS, Sir John Slessor, Combined Operations was subjected to an even more vigorous attack. Slessor proposed to leave the study of technique for opposed landings entirely to the United States, arguing that if Britain could leave the long-range air bombardment to the United States then it should also be possible to leave to them the responsibility for the study and development of technique for major landing operations. The Army once again came to the rescue. CIGS Sir William Slim emphasised that the study of the technique of landing a brigade group and larger was important and need not be expensive. Although in a future war Britain might not be ready to conduct large amphibious assaults at the outbreak, it might well be necessary to conduct operations similar to the Madagascar landings which took place in the last war. He echoed Corbett, saying:

Small operations of this nature were traditionally British and there was no reason to believe that in the event of another war, we should still not be required

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<sup>103</sup>. COS (50) 47 mtg, 22 March 1950; DEFE 4/30.

to mount this type of operation as we had done in the past.

Slim was strongly of the opinion that Combined Operations should remain an independent organisation. If, however, it was to fall under the authority of one Service, he considered that that Service should be the Army. Faced once more with the opposition of the Army, Fraser backed down. The COS agreed that COHQ should remain an independent organisation along the lines suggested in the Long Report, although the staff should be reduced by only 40 per cent.<sup>104</sup>

In the period since 1944 the Admiralty had made six separate attempts to undermine the independent status of COHQ or to have it abolished entirely. This is indicative of the Admiralty's attitude towards amphibious warfare. The Navy was unwilling to divert resources to amphibious warfare as they saw it as a distraction from their main mission.<sup>105</sup> Under the existing concepts of amphibious operations the Navy's role was to support the army in large scale operations intended as a prelude to a land campaign. In the post-war environment, where there were not enough resources to maintain an adequate fleet, it was not surprising that this inter-Service role was accorded a very low priority. A note written in July 1946 by a member of the executive of COHQ, Commodore G.R.C.Allen, is worth quoting at length:

By tradition and teaching, the Admiralty is responsible for keeping open the trade routes, which is a defensive role in warfare. The development and provision of materials suitable for carrying and landing the Army in time of war is a responsibility shared between the Admiralty and the Ministry of Transport. It is an offensive role; but nevertheless, has always been regarded as secondary to the Navy's principle role of keeping open the trade routes. The money allotted to Combined Operations must therefore, necessarily be at the expense of conventional navy ships. That is the root of the Admiralty's reluctance, in the past, to make adequate provision for Combined Operations; and that is the danger which must be guarded against.

Allen also noted that under his directive CCO was charged with "*initiating demands*" and "*stimulating action*" from the Admiralty. No government department likes being "*stimulated*" by an outside

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<sup>104</sup>. Ibid.

<sup>105</sup>. W.J.Crowe, *The Policy Roots of the Modern Royal Navy, 1946-1963*, (University Microfilms Inc, An Arbor, Michigan, 1965) p.77-79.

authority and this was another reason for the desire to abolish COHQ.<sup>106</sup> Andrew Cunningham disliked COHQ precisely for this reason. He considered that it held power without responsibility. According to Laycock:

Our views were nearly always conflicting since I spent most of my time arguing that we ought to build flat bottomed landing ships and craft, to the detriment of the programme for producing conventional men-of-war, which he, as Chief of Naval Staff, obviously favoured.<sup>107</sup>

Operational experience in command in the Mediterranean during World War Two meant that both Andrew and John Cunningham were well aware of the demands which major amphibious operations placed on the fleet, and that no such operations could be contemplated before control of the sea was secured. With Combined Operations under the wing of the Royal Marines or represented by a committee along the lines of the JPS, the Admiralty would have been able to control the *demands* and *stimuli* which it received, reducing the impact on the rest of the Navy and allowing it to concentrate resources on the traditional tools of sea power.

The immediate threat posed by the Soviet fleet in 1945 was limited. However, following the War Stalin initiated a naval building programme and between 1945 and 1950 five light cruisers and two heavy cruisers were completed and the first of fourteen 19,200 ton *Sverdlov* class cruisers was laid down. The greatest potential threat was posed by the growth in Soviet submarine strength. In 1945 the Soviets had come into possession of a number of advanced German Type XXI U-boats. This led to fears that new German technology would be incorporated in future Soviet submarines, greatly enhancing their capabilities. By 1948 both the Royal Navy and the USN were convinced that the Soviets were building a substantial submarine fleet which, in conjunction with land based aircraft, could threaten sea communications.<sup>108</sup> In April 1948 the Admiralty were predicting that by 1949 the Soviet Union would be able to mount a substantial

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<sup>106</sup>. Folio 3; DEFE 2/1647.

<sup>107</sup>. Oliver Warner, **Cunningham of Hyndhope. Admiral of the Fleet**, (London: John Murray, 1967) p.227-228.

<sup>108</sup>. Crowe, **Policy Roots**, p.116-119.

maritime force against Britain.<sup>109</sup> The implications of this appeared to confirm the need to concentrate resources on the ability to fight a future battle of the Atlantic and the relegation of other roles to a much lower priority. From 1947 the Services were planning for future conflict ten years ahead. By 1957 235 *Whiskey* class submarines had been built and with the addition of *Zulu* and *Quebec* class boats the Soviet Union produced an estimated 300 advanced submarines between 1950 and 1958.<sup>110</sup>

Soviet submarine capabilities in the 1940s and 1950s did not live up to the worst fears of Western planners. The medium range *Whiskey* class submarines were uncomplicated boats, easy to produce and simple to operate. They were not copies of the German Type XXI, being based on a wartime Soviet design.. The larger, longer *Zulu* class did incorporate German design features but only 26 such boats were built. The third post-war submarine design, the *Quebec* class, was a coastal vessel unsuitable for an Atlantic raiding role. The quality of the Soviet submarine fleet improved considerably from the late 1950s with the introduction of the *Romeo* and *Foxtrot* class boats. However, far from causing undue concern in the Admiralty, this coincided with a decision to reduce the emphasis being placed on anti-submarine warfare within the Royal Navy.<sup>111</sup>

There is some doubt whether these boats were intended to operate in an offensive or a defensive role. Certainly Stalin's concepts of maritime strategy were based on defending the Soviet Union's coastal regions from attack by enemy forces.<sup>112</sup> The main emphasis of Soviet naval strategy appears to have been that of countering a perceived threat posed by Anglo-American amphibious forces, and it is in this context that the huge submarine force may best be explained.<sup>113</sup> In this sense one could claim that the maintenance of strong amphibious forces could have exercised a powerful deterrent effect on the Soviet Union. Such forces would have exploited the

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<sup>109</sup>. Grove, *Vanguard to Trident*, p.40.

<sup>110</sup>. Polmar, *Soviet Naval Power*, p.26.

<sup>111</sup>. Norman Polmar + Jurrien Noot, *Submarines of the Russian and Soviet Navies, 1718-1990*, (Annapolis: Naval Institute Press, 1991) chapters 12 and 13,

<sup>112</sup>. Bryan Ranft and Geoffrey Till, *The Sea in Soviet Strategy*, (Annapolis: Naval Institute Press, 1989) p.99.

<sup>113</sup>. Ibid. p.123-124. J.K.Skogan and A.O.Brundtland (eds.), *Soviet Seapower in Northern Waters. Facts, Motivation, Impact, and Response*, (London: Pinter Publishers, 1990) p.12.

flexibility and mobility of allied seapower, threatening to strike against a variety of coastal targets, throwing the Soviet Union on the defensive in the war at sea. The strategic potential of amphibious forces had recently been demonstrated in Normandy and the Pacific. The Admiralty chose a different interpretation. They perceived the Soviet naval build-up as essentially offensive and acted accordingly. Facing the possibility of an attack on Britain's sea communications by a large fleet of submarines they decided to concentrate resources on meeting this threat. This approach can be criticised as over cautious. However, given the parlous state of the post-war fleet it was inevitable that the Navy would concentrate on the "*core task*" of securing command of the sea before it attempted more ambitious undertakings such as amphibious operations. To have done otherwise would have been to risk defeat at sea and a successful blockade of the British Isles.

The post-war organisation for amphibious warfare was established in the immediate aftermath of the Normandy landings. It is therefore not surprising that the agreed concept of operations and the organisation decided upon should have been designed to prepare Britain for the same kind of large scale assaults that had recently been conducted. This called for an independent, inter-Service, centralised headquarters responsible for amphibious policy and technique, and for a large scale training organisation backed up by a naval assault training force able to prepare the three Services for future assault operations. While the Army remained keen to maintain amphibious capabilities after the War, the Navy, the Service which bore the brunt of expenditure on these capabilities, was less enthusiastic. Although amphibious warfare was an offensive tool of seapower, under the existing concept of operations it was devoted mainly towards a military role, that of returning the Army to the Continent of Europe. The Royal Marines had no specific responsibility for amphibious warfare which was a drain on Admiralty resources, a constraint rather than an opportunity. Instead of exploiting the potential deterrent value of amphibious seapower the Admiralty chose to concentrate on the traditional core task of securing the sea lanes.

It is interesting to note the role of atomic weapons in the fate of Combined Operations. Large scale amphibious assaults against defended beaches require a concentration of force that would be an ideal target for atomic attack. Nevertheless, atomic weapons were not

believed to have made such assaults untenable. Both Exercise *Spearhead* and *The Study* by COHQ expressed the opinion that the vulnerability to atomic attack could be avoided by greater use of dispersion and by securing air superiority.<sup>114</sup> Although there was an appreciation of the potentially devastating results which could be achieved using atomic weapons against conventional amphibious assaults, it was believed that the limited availability of these weapons would preclude large scale use against such targets.<sup>115</sup> One should remember that the Soviet Union did not possess any atomic weapons before 1949. The radical change in the nature of warfare implied by the existence of these weapons did not begin to be fully appreciated until the development of hydrogen bombs and the expansion of atomic arsenals in the early 1950s. It was appreciated that Britain would be unable to launch major amphibious assaults in the early stages of any future war, but this was because Britain could not maintain in peacetime the resources necessary for such assaults rather than the result of a new assessment of the risk of atomic counterattack.

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<sup>114</sup>. WO 216/202. DEFE 2/1727. DEFE 2/1608.

<sup>115</sup>. *The Offensive Use of Atomic Bombs in Combined Operations*, 1949; DEFE 2/1709.



## CHAPTER THREE

### CINDERELLA OF THE SERVICES

In 1944 and again in 1949 the Admiralty proposed placing the organisation for combined operations under the specific control of the Royal Marines. This was ruled out by the existing perception of amphibious warfare as a strictly inter-Service matter and by a pre-occupation with large scale *Overlord* type operations. It was accepted that while the Royal Marines should provide troops for small scale raids, larger operations would have to be conducted by the regular Army supported, where necessary, by specialist units. During the 1950s the increasing availability of atomic weapons and the development of the hydrogen bomb put in doubt the future ability to launch large scale amphibious assaults against first rate opposition. The emphasis in amphibious warfare shifted from large scale assaults on the *Overlord* model to small scale raiding and the use of amphibious capabilities to discharge supplies through war damaged ports and anchorages. In the changed strategic environment it was no longer considered necessary to train the entire Army for amphibious operations. Amphibious warfare could now become the realm of the specialist. The Admiralty were keen to ensure that the Royal Marines should assume this responsibility, giving them a distinct and separate role from the Army and supporting their institutional survival as an integral part of the Navy.

Following the War the Royal Marines shrank from a high of 74,000 men to about 13,000 by 1948. Of these 13,000 only 2,000 were at sea on board ships.<sup>1</sup> Only three Commandos were retained, numbers 40, 42 and 45, formed into 3 Commando Brigade at Hong Kong.<sup>2</sup> In 1948 the 1SL outlined the characteristics and roles of Royal Marine Commandos to the COS. These included keeping alive the commando technique; providing a nucleus for expansion in war; and, “*the provision of highly mobile and lightly equipped units for Imperial policing and internal security duties*”. In war they were to conduct raiding; seize strategic points; assist in large scale assaults; and, if necessary, act as conventional infantry.<sup>3</sup> Too often shortage of Army

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<sup>1</sup> J.L.Moulton, *The Royal Marines*, (Eastney: The Royal Marine Museum, 1981) p.111.

<sup>2</sup> Robin Neillands, *By Sea and Land. The Story of the Royal Marine Commandos*, (London: Fontana, 1988) p.227.

<sup>3</sup> COS (48) 203, 11 December 1948, memo by 1SL; DEFE 5/9.

units meant that Commandos were allotted to Army policing tasks which allowed little or no scope for amphibious training and which represented an inefficient use of elite troops. From Hong Kong the Commando Brigade moved to Malta in 1948 to become the mobile reserve for the Middle East and Mediterranean. Twelve months later they returned to Hong Kong and in 1950 the Brigade began a two year tour of duty fighting the Communists in Malaya. Operating in the Far East in an army role allowed the Commandos no time to practice amphibious warfare.<sup>4</sup>

The use of the Marines in this role laid them open to the charge that they were no more than expensive conventional soldiers. The Harwood Report concluded that as the Corps performed an army role in peacetime it should either be disbanded or transferred to the Army. In July 1950 the new CGRM, General Hollis, noted that there was a danger that the Corps could be considered unbalanced and uneconomical and that "*one possible line of reasoning*" was that the Corps was redundant in its present role. He advocated retaining the Commandos and attaching amphibious striking forces to the main fleets in order to emphasise the unique nature of the Corps.<sup>5</sup> By seeking to give the Royal Marines special responsibilities for amphibious warfare the Admiralty sought to reinforce the distinct and special nature of these troops and thus to protect them from either disbandment or amalgamation into the Army.<sup>6</sup> Nevertheless, in 1953 the Admiralty was considering a major cut in the strength of the Royal Marines including the loss of two out of three Commando units as part of the *Radical Review* of defence policy. The CGRM, General Westall, reacted strongly to these suggestions, claiming that the Commando Brigade was not viable with only one unit and that if the brigade could not be maintained then "*the only logical answer*" would be to abolish the Corps.<sup>7</sup> In the event the Commando Brigade was not cut, although the episode would seem to confirm Major-General Moulton's opinion that "*if the Board had the choice between a new ship and a Commando, they would go for the ship every time*".<sup>8</sup>

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<sup>4</sup>. Neillands, *By Sea and Land*, chapter 8.

<sup>5</sup>. CGRM Hollis to the Second Sea Lord, 24 July 1950; ADM 205/75.

<sup>6</sup>. VCNS to 1SL, 10 November 1950; ADM 205/75.

<sup>7</sup>. ADM 205/90, *Radical Review - Misc. Paper - August 1953*.

<sup>8</sup>. Neillands, *By Sea and Land*, p.298.

In August 1950 Admiral Joy (USN), commander of UN Naval forces in Korea, requested a small raiding force to operate against Communist lines of communications. The Commando Brigade was unavailable as it was fully occupied in Malaya. As a result a new unit, 41 (Independent) Commando, was raised in the United Kingdom from various Royal Marine establishments. Supplemented by a draft on its way to 3 Commando in Malaya, the unit arrived in Japan in September 1950. In conjunction with the Americans the Commando, under Lieutenant-Colonel D.B.Drysdale, conducted a number of small scale raids against enemy communications during October before distinguishing itself in operations alongside the US 1st Marine Division in the retreat to the coast from the Chosin Reservoir. In May 1951 the Commando took part in a demonstration off Choda, an island off the east coast. Transported in an American LSD and APD the Marines landed unopposed in American LVTs and withdrew after eight hours, having blown up a railway line. In July the unit occupied some islands off Wonsan from which small raids were periodically conducted. The Commando, now under Lieutenant-Colonel F.N.Grant, handed over their base at Wonsan to South Korean Marines in December 1951 and withdrew to Japan before returning to Britain to be disbanded at Plymouth on 22 February 1952.<sup>9</sup>

41 Commando was not a full Commando, consisting of only 200 to 300 men. Once in Japan it was joined by a tiny unit known as *Poundforce*, raised from volunteers from the Far Eastern Fleet. It is significant that Britain's existing amphibious spearhead and specialist raiding force, 3 Commando Brigade, could not be employed in Korea. The fact that Drysdale managed to raise 41 Commando in only two weeks and that it gave such a good account of itself is a credit to the Commando organisation as a whole. That the existing Brigade was unavailable is a reflection on the low priority accorded to the need to maintain an amphibious force readily available for operations anywhere in the world. Even had 3 Commando been available the Royal Navy could not have provided it with its own assault lift

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<sup>9</sup> D.B.Drysdale, "41 Commando", *Marine Corps Gazette*, August 1953 p.28-32. Anthony Farrar-Hockley, *The British Part in the Korean War. Volume 1. A Distant Obligation*, (London: HMSO, 1990) p.326-347. ADM 202/459, *41 Independent Commando, RM. - War Diary*. ADM 202/481, *Report of Operations - 41 Independent Commando*. ADM 1/21882, *Royal Marine Commando Operations in Korea*. ADM 116/5863, *Withdrawal of 41 Independent Commando RM from Korea*.

without bringing the necessary ships and craft out of reserve, or converting merchant ships to LSI(M).<sup>10</sup>

The experience of Korea did not have a profound influence on the fate of amphibious warfare in the United Kingdom. Royal Navy warships and aircraft conducted numerous bombardments of coastal targets and participated in the support of amphibious operations.<sup>11</sup> However, no British amphibious warfare ships or craft took part in operations in Korea and the British initiated no major landings. The American landing at Inchon and the diversions and raids served merely to confirm the basically World War Two mindset of AWHQ, which concentrated on raiding in the early stages of war with the possibility of large scale operations later. It was acknowledged that Britain could not maintain in peace the ships and craft required to conduct an operation of the size of Inchon. What Inchon did prove was that amphibious landings were still viable. The landings, which reversed the tide of the Korean War and led to the collapse of the North Korean offensive, could hardly have been more difficult. The port of Inchon had a tidal range of over 30 feet and was protected by banks of mud which were exposed at low tide. There were no beaches as such to land on, only a seawall which could have proven a hazard to the assault and the disembarkation of vehicles and stores. A fortified island, Wolmi-Do, dominated the harbour. That such a landing could be successfully conducted may have encouraged those who still saw a role for amphibious operations but its immediate relevance to Britain was not thought to be great. The Admiralty considered that Korea provided “*very little in the way of sound experience*”.<sup>12</sup> Despite the success of amphibious operations in Korea, and the Navy’s experience of limited war, the first priority remained control of the sea lanes in a war against the Soviet Union.

In March 1950 the COS had requested that Wildman-Lushington carry out a survey of the ships and craft required to be maintained in peace.<sup>13</sup> The difference of opinion with the Admiralty over the proposed brigade group lift had yet to be resolved. The report was complete in August 1950, although agreement with the Admiralty

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<sup>10</sup>. Ibid.

<sup>11</sup>. Grove, *Vanguard to Trident*, p.142-143 + 146-147.

<sup>12</sup>. Ibid. p.150.

<sup>13</sup>. COS (50) 47 mtg, 22 March 1950; DEFE 4/30.

could not be reached and it was not until March 1951 that the COS endorsed a revised version which subsequently became the approved policy regarding ships and craft.<sup>14</sup> The purposes for which amphibious ships and craft might be required in peacetime and during the early months of war were agreed to be:

- A. raiding operations in Western Europe and the Mediterranean.
- B. peacetime training and elementary training in war.
- C. the strategic mobility of the Army
- D. the Royal Navy Rhine Flotilla.
- E. the maintenance of a force over beaches when port facilities are not available.
- F. withdrawal of a force overseas.
- G. the emergency discharge of cargoes in the United Kingdom owing to damage to ports.
- H. small scale amphibious assault operations which may include;
  - 1. the seizure of small strategic objectives in the face of light opposition.
  - 2. operations on the seaward flank of the Army.
  - 3. operations in support of the United Nations before the outbreak of general war.

Of these it was considered that A,B,C,D and H could be met simultaneously. The ships and craft required for H, the brigade group lift, would alternatively be available for E,F or G depending on requirements.

The peacetime shipping requirement remained for an Assault Training Force on brigade group scale, see Table One.

**Chapter Three: Table One**

LSI(L)	3	LST(3)	11
LST(Q)	1	LST(C)	2
LCT(8)	24	LCM(7)	14
LCA	90	LCP	10
LCN	4	LSH	1
LSH(S)	2	LCH	2
MS(LC)	1	MS(LS)	1
LSM(R)	2		

The minimum requirement was for battalion lift in commission with the remaining craft held in Category A reserve. Ships and craft beyond those required for brigade group lift were to be held in

<sup>14</sup>. COS (51) 146, **Combined Operations Ships and Craft Required to be Maintained in Peacetime**, 19 March 1951, memo by CAW; DEFE 5/29.

Category C reserve. It was recognised, however, that the Navy would be unable to provide the necessary manpower to achieve these levels of readiness. The situation had advanced little in five years. In 1946 the provision of the ships and craft necessary to lift a brigade group was agreed as an ultimate target. At the same time it was appreciated that there was no immediate prospect of reaching this target. In 1951 the brigade group lift at the outbreak of war was accepted as a matter of policy, but at the same time it was recognised that this policy could not be fully implemented due to manpower shortages. The provision of a mere 500 extra men would have met the full manpower requirements for this lift.<sup>15</sup> The failure to provide these men indicates a general lack of urgency. The Navy at this time maintained a large fleet in reserve ready to be manned upon mobilisation. In this respect the amphibious lift was no different from the rest of the Navy. Nevertheless, sufficient lift for a brigade group was approved as the minimum necessary in peacetime and the failure of the Admiralty to make the necessary manpower available illustrates the low priority they accorded amphibious capabilities.

In 1952 the COS initiated a review of British foreign and defence policy. A series of high level inter-Service discussions resulted in the Global Strategy Paper which laid down the broad principles that were to govern defence policy. The paper predicted that a future war would begin with a short period of great intensity including atomic attacks which would be followed by a phase of "*broken-backed*" hostilities involving surviving forces. The emphasis in defence policy was to be placed on the forces required for the intense opening period and those which offered best deterrent value. Effectively, Britain was to concentrate on its atomic weapons capability. It was recognised that atomic and new hydrogen bombs had altered the nature of warfare.<sup>16</sup> There would be no place for large vulnerable assaults against defended coastlines in the early stages of a future war.

With Britain increasingly committed to the Continent after the formation of NATO in 1949 and fears about the possible disruption of port facilities, the supply and maintenance of British forces in Europe began to dominate thinking about amphibious warfare. The ability to conduct small scale amphibious assault operations was now at the

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<sup>15</sup>. COS (51) 146

<sup>16</sup>. Grove, *Vanguard to Trident*, p.84-85.

bottom of the list of requirements for amphibious ships and craft.<sup>17</sup> By November 1952 that role was no longer listed by CAW amongst the tasks necessary to prepare for in the early stages of a global war.<sup>18</sup> Although there was still a requirement for raiding forces, the main emphasis had shifted to the provision of sufficient craft and trained personnel to provide for the emergency discharge of cargo across beaches. In April 1952 CAW, now Major-General V.D.Thomas, called for the ships and craft of the brigade group lift to be made available within two months of mobilisation in order to meet the wartime requirement for the supply and withdrawal of British forces in Northwest Europe.<sup>19</sup> He anticipated the early degradation of conventional supply and shipping facilities due to atomic attack and devised *Plan Teak* to supply and maintain British forces on the continent using LSTs landing at pre-prepared hards.<sup>20</sup>

A Territorial Army unit, 264 (Scottish) Beach Brigade, was formed in Scotland in 1947. Its tasks included the maintenance and evacuation of British forces over beaches and the working of damaged ports. The provision of beach groups for amphibious assault operations, although originally a major part of the unit's rationale, was accorded a very low priority by 1952.<sup>21</sup> The Brigade practised the emergency discharge of cargo into Britain following an atomic attack. In 1951 it conducted Exercise *Overside* to examine the possible role of the brigade in running an anchorage port after the major West Coast ports had been attacked with atomic weapons. In Exercise *Swansong* the Brigade investigated the problems of supplying a Glasgow devastated by atomic attack through the minor ports of Troon, Irvine and Ardrossan. It was recognised that the Beach Brigade was well equipped to operate alternative or damaged ports in wartime, and that it would be the only unit available to do so.<sup>22</sup>

The increasing interest in beach maintenance and discharge via damaged ports did not mean that AWHQ was no longer interested in maintaining the technique of amphibious assault. CAW reiterated the

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17. COS (51) 146.

18. COS (52) 649, 29 November 1952, report by CAW; DEFE 5/43.

19. COS (52) 234, 30 April 1952, report by CAW; DEFE 5/39.

20. COS (52) 391, 30 April 1952, memo by CAW; DEFE 5/40.

21. COS (52) 645, 25 November 1952, note by the War Office; DEFE 5/42. **A Short Review of the History and Development of British Amphibious Warfare**, 23 August 1954; DEFE 2/1900.

22. Docket 28/2/53; DEFE 2/1802.

importance of conducting exercises on brigade group scale in order to give the necessary scope to the planning staffs and the minimum training to individuals.<sup>23</sup> The need to have raiding forces available at the outbreak of war continued to be stressed. The requirement for raiding forces was discussed at an inter-Service meeting held in COHQ on 27 June 1947. It was agreed that while the Service Ministries were to retain responsibility for conducting raids and for training and equipment, COHQ should be responsible for coordination and should act as the central advisory authority. In order to ensure close cooperation between the various responsible organisations the COS established the Inter-Service Committee on Raiding Operations, a permanent committee on Assistant COS level, with COCOS as its chairman.<sup>24</sup>

In April 1949 the Committee reported to the COS:

We consider that in the opening stages of a future war it is probable that the enemy will be dispersed on a broad front with long and vulnerable lines of communication. We also consider that the situation would be fluid and therefore favourable for the execution of raids before the enemy has had time to consolidate his position.

It was considered that in order to take advantage of this favourable situation, Britain should be ready to launch seaborne raids immediately on the outbreak of war.<sup>25</sup> The only existing force specifically designated for carrying out seaborne raids was the Commando Brigade which was currently based in the Mediterranean. The COS appreciated that the need for raids in the early stages of war might arise and directed the JPS to investigate.<sup>26</sup>

The raiding requirement formulated by the JPS was for the provision of one Commando Brigade for raiding operations in the Mediterranean at the outbreak of war. This was to be followed by the formation of three Commandos in the United Kingdom for raiding operations by D+3 months and a further three Commandos by D+6 months. Working on the assumption that the ships and craft required for one Commando raid at a time were needed both in the

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<sup>23</sup>. COS (52) 649.

<sup>24</sup>. Minutes of a meeting in COHQ, 27 June 1947; DEFE 2/1449. COS (47) 93, 7 August 1947, memo by COCOS; DEFE 5/2. COS (48) 47 mtg, 2 April 1948; DEFE 4/12.

<sup>25</sup>. COS (49) 119, 5 April 1949, report by the Inter-Services Committee on Raiding Operations; DEFE 5/4.

<sup>26</sup>. COS (49) 52 mtg, 6 April 1949; DEFE 4/21. COS (50) 6 mtg, 9 January 1950; DEFE 4/28.



Mediterranean and the United Kingdom, the agreed shipping requirement was for three LSI(M), eight LCP, 15 LCA and one LCN in each theatre.<sup>27</sup> Due to a shortage of manpower the Admiralty could not anticipate meeting the agreed timetable for the provision of Commandos before 1957 when an increase in National Service intake would provide the necessary trained reserve. Prior to 1957 reduced availability of Commando units would have to be accepted.<sup>28</sup>

The requirement for raiding operations in Western Europe was considered by the JPS in 1951 and approved in its final form by the COS in March 1952.<sup>29</sup> The report anticipated that Allied forces would be heavily outnumbered in the opening phase of a war in Europe. Small raiding forces could achieve results far beyond anything that similar sized orthodox units might be able to do. Operations against enemy lines of communication and their command and headquarters facilities were considered. The value of raids in boosting Allied morale was noted as was a requirement for intelligence and reconnaissance in force. The use of raids as part of strategic deception was anticipated. It seems that little had changed since the War. Commando units in the 1950s were to be used in almost exactly the same kind of operations as had the original Commandos in World War Two.

Unfortunately the necessary shipping and equipment was lacking. In his Progress Report of April 1952 CAW Thomas reported that neither the manpower nor the equipment for the raids outlined by the JPS were available.<sup>30</sup> He suggested that a joint Belgian/Dutch/British Commando force be prepared for raiding operations in war. This suggestion, foreshadowing the United Kingdom/Netherlands Amphibious Force created in 1973, was resisted by the Admiralty as it represented a manpower commitment in the early stages of war that Britain might not be able to meet.<sup>31</sup> Raiding stores were inadequate, there having been no replacement of equipment and stocks since 1945.

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<sup>27</sup>. COS (51) 146.

<sup>28</sup>. COS (51) 70, 15 February 1951, memo by 1SL; DEFE 5/28. COS (51) 41 mtg, 5 March 1951; DEFE 4/40. COS (51) 735, 10 December 1951, memo by 1SL; DEFE 5/35. COS (51) 205 mtg, 17 December 1951; DEFE 4/50.

<sup>29</sup>. COS (51) 758, 18 December 1951, note by the secretary of the COS Committee; DEFE 5/35. COS (52) 45 mtg, 31 March 1952; DEFE 4/53. COS (52) 192, **Policy for Raiding**, 1 April 1952; DEFE 5/38.

<sup>30</sup>. COS (52) 234, 30 April 1952, report by CAW; DEFE 5/39.

<sup>31</sup>. COS (52) 69 mtg, 19 May 1952; DEFE 4/54.

In 1952 stocks of canoes and inflatables were 30 per cent below entitlement and the £37,000 allocated by the Admiralty for 1953/54 to purchase raiding stores was considered by CAW to be insufficient.<sup>32</sup> Although some progress was being made with the replacement of minor craft, little actual production was being undertaken. The Inter-Service Committee on Raiding Operations reported in March 1953 that the provision of raiding equipment was inadequate and that the forces available to carry out raiding operations in the early stages of war were too few.<sup>33</sup>

In 1951 CAW Thomas recommended that the ships and craft allocated for training purposes should be formed into an Amphibious Training Squadron. It was thought that this might raise the morale of the crews and provide at least the nucleus of an amphibious force in being.<sup>34</sup> The Admiralty accepted the proposal and so the Amphibious Warfare Squadron (AW Squadron) was formed. The AW Squadron was to have sufficient lift for a battalion group, for which three LSTs and four LCTs were required. However, there was an immediate deficiency of an LST and two LCT.<sup>35</sup> The AW Squadron was deployed to the Mediterranean in 1952 and in 1953 the missing LST and LCTs were sent to join the squadron in case of possible operations against Egypt.

It had originally been intended to include amphibious training in the normal routine of the post-war Army. However, with the cancellation of the planned CTEs and the failure to create an Assault Training Force this ideal was never achieved. The best that could be hoped for was occasional exercises involving Army formations, with instruction given to officers at the School of Combined Operations. The Army was able to conduct very little amphibious training. In autumn 1947 combined training was conducted at Flensburg and Eckernförde in Germany between units from the British Army of the Rhine (BAOR) and amphibious vessels, including the LSTs *Suvla*, *Reggio* and four LCTs. The exercise was prepared at short notice at the request of the Army. Training included dry shod embarkation and landing of

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<sup>32</sup>. COS (52) 649, 29 November 1952, report by CAW; DEFE 5/43.

<sup>33</sup>. COS (53) 151, 24 March 1953, report by the Inter-Service Committee on Raiding Operations; DEFE 4/45.

<sup>34</sup>. COS (51) 601, 22 October 1951, report by CAW; DEFE 5/34.

<sup>35</sup>. JP (52) 1, 14 March 1952, report by the JPS; DEFE 6/20. COS (52) 45 mtg, 31 March 1952; DEFE 4/53.

vehicles, infantry trials in LCA, the beaching of ships and craft and wading of waterproofed vehicles. Duplex Drive tanks, Neptune amphibians and DUKWS were loaded and unloaded in deep water. No attempt was made to carry out exercises on a large scale.<sup>36</sup> In 1948 one battalion of the Guards Brigade practised landing in an exercise in the Tripoli area and a similar exercise was planned for 1952, although this had to be abandoned due to the worsening political situation in Egypt.<sup>37</sup> In Autumn 1950 a Combined Operations Training Squadron based around LST(3) *Suvla* toured the Mediterranean. At Trieste *Suvla* was joined by a second LST and participated in a landing with the 24th Infantry Brigade. Landings took place over two nights and 1525 men with 274 vehicles and 22 guns were successfully landed across the beach.<sup>38</sup>

Isolated and small scale combined exercises could not provide Britain with an amphibious army. Although useful in acquainting officers and men in the problems of embarkation and in maintaining at least some awareness of the problem of seaborne assault, irregular exercises involving a handful of ships and craft were no substitute for regular and systematic training. The benefits of training the occasional battalion or brigade were short-lived because National Service brought a rapid turnover of men. The hope of 1944 and 1945 to have the entire Army trained in amphibious warfare proved to be unrealistic. The only Army unit to receive regular amphibious training was the Beach Brigade. The Royal Marines were more fortunate. Arriving in Malta from Malaya in the summer of 1952, 3 Commando Brigade was able to conduct a series of amphibious exercises with the AW Squadron and the Mediterranean Fleet. The commanding officer of 3 Commando, James Moulton, relished the opportunity for his brigade to train with the AW Squadron. He was in no doubt about the necessity to undertake regular training and exercises in order to maintain proficiency in amphibious warfare:

A few theoretically trained staff officers dotted here and there through an amphibious force or landing force will not achieve success unless exercises and operations are kept to the most obvious and elementary projects. To go beyond this and, indeed, to tackle with confidence even elementary projects, a

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<sup>36</sup>. Folio 15, docket 547A/47; DEFE 2/1557.

<sup>37</sup>. DEFE 2/1900.

<sup>38</sup>. Folio 17; DEFE 2/1698. Folio 118; DEFE 2/1699.

large number of people of various ranks and various coloured uniforms have got to know what they are about.<sup>39</sup>

The amphibious exercises ended in 1954 when 42 Commando returned to the United Kingdom and the rest of the Brigade was posted on internal security duties in Cyprus.

Approved policy for the employment of amphibious forces was solely concerned with training and the early stages of global war. In order to set a policy for the employment of such forces in cold war, in May 1951 the War Office were invited to submit an appreciation of requirements for 1952. They nominated the JPS to conduct this investigation and the report was submitted in March 1952.<sup>40</sup>

The JPS noted that recent disturbances in the Middle East had demanded assault shipping sufficient to lift a brigade group. Although it was acknowledged that this requirement could arise again, it was not deemed sufficiently likely in 1952 to be given a high priority, without which the Admiralty would be unable to maintain the necessary ships and craft. The target was thus the ability to lift a battalion with elements of supporting arms. This was the smallest formation that could operate tactically in the assault while remaining within the capacity of the Admiralty to supply the necessary shipping: three LSTs and four LCTs. The JPS saw no cold war operational requirement in Home Waters and Northwest Europe, although the unsettled conditions within the Middle East and Africa could require landings across beaches or the transport of troops and heavy equipment not possible by air. As such they recommended that the AW Squadron be moved to the Mediterranean where it would be centrally placed for cold war tasks as well as for training. They also saw a requirement for an amphibious force adequate for battalion lift to carry out cold war tasks in the Far East. They suggested that an immediate reserve of 1 LST(A), 2 LCT(8) and 6 LCA be established there in order to undertake minor landings pending the arrival of the AW Squadron from the Mediterranean.<sup>41</sup> The Admiralty vetoed the latter proposal.<sup>42</sup>

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<sup>39</sup>. JLM [J.L.Moulton], "Amphibious Training in the Mediterranean, 1952-1954", *Naval Review* November 1954, p.464-472.

<sup>40</sup>. COS (51) 83 mtg, 21 May 1951; in DEFE 4/42. COS (51) 88 mtg, 28 May 1951; DEFE 4/43. JP (52) 1.

<sup>41</sup>. JP (52) 1.

<sup>42</sup>. COS (52) 45 mtg, 31 March 1952; DEFE 4/53.

The COS approved the decision that the long term cold war requirement was for sufficient amphibious craft to lift one battalion. Once again, however, they were forced to note that naval manpower shortages meant that there was no prospect in the immediate future of meeting this requirement without altering naval priorities. It also agreed that the AW Squadron should be sent to the Mediterranean for a period, where it would be at the disposal of the COS to meet cold war requirements.<sup>43</sup> In his progress report of April 1952 CAW Thomas reiterated the need for the extra LST and LCTs to bring the Squadron up to full strength.<sup>44</sup> The Navy stressed that the question would have to remain in abeyance until March 1954 due to a gradual reduction in manpower.<sup>45</sup>

In response to a request by the COS the VCIGS, Lieutenant-General Sir Neville Brownjohn, was instructed to prepare a report on amphibious warfare policy. Taking it to be his objective to discover any possible reductions in the Amphibious Warfare organisation, Brownjohn believed that as the organisation had been examined by numerous committees over the last ten years there would be very little room for "*further pruning*". He believed that a substantial reduction would only be achieved by a drastic reorganisation which effectively meant either maintaining the present organisation or disbanding the AWC at Fremington. He estimated that between £100,000 and £150,000 out of a total running cost of £250,000 a year could be saved if the AWC was disbanded (except for AWXE), with the signals and artillery elements transferred to Service Schools and a Mobile Instructional Team replacing SAW. If this option were adopted, Brownjohn concluded that it would no longer be possible to develop the technique of amphibious warfare. Also, in time, training would tend to become academic and cooperation between the Services and with allies would be prejudiced.<sup>46</sup>

When the COS discussed Brownjohn's note on 10 February 1953 the 1SL Roderick McGrigor resurrected the proposal to amalgamate the Amphibious Warfare organisation with the office of CGRM. While

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<sup>43</sup>. Ibid.

<sup>44</sup>. COS (52) 234, 30 April 1952, report by CAW; DEFE 5/39.

<sup>45</sup>. COS (52) 431, 12 August 1952, note by Admiralty; DEFE 5/40.

<sup>46</sup>. COS (53) 69, 5 February 1953, note by VCIGS, docket AW(o)7/52/53; DEFE 2/1845.

accepting that it was important to keep the technique of amphibious warfare alive, he considered that it would be more economical to turn the whole organisation over to the Royal Marines. He did not believe that it was necessary to maintain a separate headquarters. Although amphibious warfare would thus become the responsibility of one Service in peacetime, there would be inter-Service representation on the Royal Marine Staff. The Army viewpoint remained that if the organisation was going to be maintained, it should remain firmly inter-Service. The Admiralty was invited to submit detailed proposals and Brownjohn was instructed to revise his paper.<sup>47</sup>

Brownjohn submitted his revised paper on 18 May 1953. Once again he considered the possibility of disbanding the AWC and replacing SAW with a Mobile Instructional Team and once again the idea was rejected as without the School it would be impossible to develop the technique of amphibious warfare. The only other way that Brownjohn could see to save money was to amalgamate AWHQ with some other organisation. He suggested amalgamation with either the CGRM or of AWHQ with SAW. The former he did not discuss as it was subject to an Admiralty investigation. He argued that the latter was not worthwhile as the saving would be small and because the distance between SAW and London would considerably detract from the ability of CAW to advise the COS and the Services.<sup>48</sup>

The Admiralty proposals were in essence a return to those made by Admiral Fraser in 1949. CGRM was to assume the additional title and role of CAW. In this capacity he would be adviser to the COS on amphibious warfare. The existing Royal Marines Office would be re-organised within the Admiralty and would have an integrated tri-Service staff. CGRM, in his capacity as CAW, would submit periodic reports to the COS Committee via the 1SL and would be invited to attend meetings when his directive was discussed. The directive would remain essentially unchanged but would be issued to him by the Admiralty after agreement by the COS and the Minister of Defence.<sup>49</sup>

Under these proposals it was quite clear that the Admiralty would retain full responsibility for the Royal Marines. The Marines, and

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<sup>47</sup>. COS (53) 21 mtg, 10 February 1953; DEFE 4/60.

<sup>48</sup>. Note by VCIGS, 18 May 1953, given at appendix to COS (53) 374; DEFE 5/47.

<sup>49</sup>. COS (53) 357, 22 July 1953, report by Admiralty; DEFE 5/47.

therefore CAW, would remain under the authority of the Admiralty and rely on the Board for all administrative and financial support. Details of the financial provision for amphibious warfare would be provided in the Navy Estimates, although the Admiralty could not bind themselves to allocate any particular sum to that area. CGRM would require officers from AWHQ in order to preserve the inter-Service nature of amphibious warfare but the Admiralty hoped that an overall manpower saving of 14 officers and 26 other ranks could be achieved. The financial saving was estimated at £34,000 annually. The AWC would move to Poole, amalgamating with the ASRM under a Royal Marine officer. ASRM would become the Landing Craft School to differentiate itself from SAW, which would continue along present lines, albeit with a reduced staff. AWXE and AWSS would move to Poole with the rest of the AWC and continue with reduced staffs, AWXE merging with the Landing Craft School. The financial saving was estimated at £131,000 annually.<sup>50</sup>

Even prior to the forwarding of detailed proposals AWHQ was sceptical of the value of amalgamating with the Royal Marines. Problems concerning access to the COS were anticipated as CAW could only have direct access to the Chiefs on matters concerning his directive. On other matters he could only approach through the Chief or Vice Chief of the Naval Staff which would effectively mean that his advice would always be in accordance with Admiralty policy. Periodic reports submitted through the 1SL would have the same drawback. Essentially CAW and his staff would no longer be an independent organisation representing the inter-Service needs of amphibious warfare. CGRM and his Naval and Marine staff would owe their primary allegiance to the Admiralty. AWHQ also concluded, in line with the Brownjohn recommendations, that the interests of amphibious warfare would best be served by keeping AWC intact. In 1950 the CGRM and COCOS had set up a working party to investigate the possible combination of CSS and the Signal School, Royal Marines and it had recommended that the two organisations remain separate.<sup>51</sup> In January and February 1953 they had also discussed the possibility of amalgamating AWXE and ASRM. Again both CAW and CGRM had agreed that such an amalgamation was undesirable. Noting that the directives of CAW and CGRM were

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<sup>50</sup>. Ibid.

<sup>51</sup>. Docket AW 1031/53; DEFE 2/1863.

widely divergent they anticipated that the amphibious outlook might tend to be swamped by the domestic requirements of the Royal Marines.<sup>52</sup>

When the Admiralty proposals came up for discussion before the COS, CAW Thomas strongly emphasised his view that they would lead to a loss of efficiency. CIGS Sir John Harding stated the War Office opinion that the organisation must remain on an inter-Service basis and not be subjected to the fluctuating financial policy of an individual Service Ministry. After discussion the Committee accepted that CAW must remain directly responsible to the COS and as such his duties could not be merged with those of CGRM. A working party was set up under Sir Harold Parker in order to carry out a comprehensive examination of the present Amphibious Warfare organisation and to advise the COS on any economies that could be effected without undue loss of efficiency.<sup>53</sup>

The Parker Working Party submitted their report on 29 October 1953.<sup>54</sup> The report began by identifying Amphibious Warfare as the "*Cinderella of the Services*" that may at times "*have to be content with what is left on the plate*". They believed that there was a malaise within the organisation stemming from a lack of understanding of the potentialities of amphibious warfare and of what was being done to foster and develop the technique. It was their opinion that without attempts to revive it, the organisation would tend to deteriorate gradually.

The working party recommended that AWHQ should remain in the Whitehall area. No major cuts would be possible unless AWC was reorganised. If this was done (as recommended) then economies in AWHQ would follow. They recommended that AWSS and SAW combine, with a more restricted list of courses. The possibility of replacing the Schools with travelling teams based at Fremington was considered but rejected as inadequate. The proposal to move the Schools to Poole to be accommodated alongside the ASRM was also

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<sup>52</sup>. Correspondence between COCOS and CGRM in DEFE 2/1830. **Assumption by CGRM of the Functions of CAW**, AWHQ internal paper, folio 21, docket AW(o)7/52/53; DEFE 2/1845.

<sup>53</sup>. COS (53) 374, **Interdepartmental Working Party on the Amphibious Warfare Organisation**, 1 August 1953; DEFE 5/47. COS (53) 93 mtg given at appendix to COS (53) 374.

<sup>54</sup>. COS (53) 527, 29 October 1953, report by Working Party; DEFE 5/49.



rejected as this would cause accommodation difficulties and would require heavy capital expenditure. In preference to this the working party recommended that the Schools should move (as a combined establishment) to Old Sarum where the School of Land/Air Warfare was situated. They could either remain functionally separate or be fully integrated with the School to form a new amphibious warfare wing in a renamed School of Land, Air and Amphibious Warfare. This latter option was recommended as it offered the greatest opportunity for economy and eliminated the possibility of the duties of the two Schools over-lapping. In conjunction with the move the working party recommended a reduction in the AWSS/SAW establishment from 22 instructors to 15. The fact that Old Sarum was land locked did not worry the working party. They did not believe that a coastline was necessary for instruction, and if demonstrations should prove necessary it was “*only*” 40 miles to Poole or Eastney. They acknowledged that for reasons of tidal conditions and other factors it was not practical to move AWXE from North Devon. They did believe, however, that it was possible to secure a 25 percent reduction in the establishment and that its manning could be largely civilianised, leaving nine officers, five other ranks and 97 civilians. The workshops and stores were to redeploy from Westward Ho to Instow to operate alongside the Fording Trials Branch. An increase of 100 per cent in the annual grant for the purchase of materials and equipment was also recommended (from £750 to £1,500).<sup>55</sup>

CAW agreed with many of the conclusions of the Parker Report but was hostile to the suggested break-up of AWC and the move of the Schools. The proposals were condemned as liable to lead to decreased efficiency both in peace and on the outbreak of war and to the lowering of the prestige of SAW. Detailed examination of the proposals by CAW showed them to be less financially desirable than the working party claimed.<sup>56</sup> A final decision on the recommendations was delayed until after the JPS had undertaken a study of the operational requirements for amphibious warfare.<sup>57</sup>

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<sup>55</sup>. Ibid.

<sup>56</sup>. COS (53) 579, 25 November 1953, memo by CAW; DEFE 5/50. COS (54) 110, 6 April 1954, report by CAW; DEFE 5/52. DEFE 2/2061.

<sup>57</sup>. COS (54) 110.

The JPS submitted their report on the operational requirements for amphibious warfare in March 1954.<sup>58</sup> The report specifically ruled out the requirement to conduct large scale assaults either in cold war or in the early stages of hot war. Interest in the large scale assault was to be limited to research and development of craft and special equipment, with the technique kept alive by study at staff level only, in collaboration with the United States. In the early stages of hot war amphibious operations would, of necessity, be limited to small scale raids. Although the JPS could foresee no operational requirements for amphibious forces in Northwest Europe or the Far East, they considered that a small amphibious force was required in the Middle East. The AW Squadron and the Commando Brigade, both currently based in the Mediterranean, could fulfil this role. Should a need for amphibious shipping arise in the Far East then the necessary lift could be transferred from the Middle East. Because of this requirement the JPS recommended that training in small scale amphibious operations and raiding should continue. However, for reasons of economy, training and trials should be restricted to the AW Squadron, the Royal Marines and the Beach Brigade.

This conclusion directly contradicted the accepted wisdom of the previous decade. Preparation for amphibious warfare was to be the exclusive province of a few specialist units, although the JPS did concede that minor exercises by Army units up to battalion strength should not be ruled out. This change was brought about by the increased emphasis on small scale operations and raiding. There was no need to train large Army formations to conduct large scale assaults that would be impossible in the early stages of a major war and were unnecessary in cold war. The development of the hydrogen bomb and the increasing availability of atomic weapons put in doubt the viability of large scale landings, even in the latter stages of a conflict. Under these conditions what one needed were small specialist amphibious forces capable of reacting promptly to a situation as it arose. The COS discussed the report on 11 March and in approving its conclusions they directed that it should be taken into account when considering the future of the Amphibious Warfare organisation.<sup>59</sup>

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<sup>58</sup>. Issued in its final form as COS (54) 79, **Amphibious Warfare - Operational Requirements**, 12 March 1954, report by the JPS; DEFE 5/51.

<sup>59</sup>. COS (54) 27 mtg, 11 March 1954; DEFE 4/69.

As a result, in April the COS directed that in order to keep alive the technique of amphibious warfare the SAW, AWSS, and AWXE, together with ancillary units, should remain in the Fremington area. In rejecting the proposed move to Old Sarum the COS noted that it was not financially desirable. All other aspects of the Parker Report were accepted and thus the Amphibious Warfare organisation was subjected to another round of cuts.<sup>60</sup> In June 1954 the COS approved the terms of reference of a working party to carry out a comprehensive review of the future role of amphibious warfare, given the changing strategic environment. The guiding principle of the appreciation was to be that Britain, the Soviet Union and the United States all possessed hydrogen bombs, and that global war was unlikely within the next four or five years. The working party was established under VCNS Vice Admiral W.W.Davis with representatives from the three Services, the Ministry of Defence and AWHQ.<sup>61</sup>

The Davis Working Party report, submitted on 9 July 1954, built on the position established by the JPS in March.<sup>62</sup> The peacetime requirement for amphibious forces remained that of sufficient lift for a battalion with supporting arms. The advent of the hydrogen bomb meant that in hot war the offensive wartime requirement was now limited to raiding. Amphibious training in peace could be limited to the study of the staff work and techniques necessary for the mounting of a brigade group assault, and to amphibious exercises up to the strength of a battalion with supporting arms. The working party noted that should a requirement arise for a large scale amphibious assault then it would have to be sponsored by the United States.

The working party felt itself unable to give firm recommendations about the future of the Amphibious Warfare organisation but argued that the inter-Service nature of the organisation should be maintained. However, despite this they believed that the time was right for the Royal Marines to play the leading role in amphibious warfare. They recommended that the AWC should move from Fremington to the ASRM at Poole. The new CAW, Major-General C.F.Phillips, agreed with the recommendation to close the AWC and to centre all training,

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<sup>60</sup>. COS (54) 44 mtg, 14 April 1954; DEFE 4/69.

<sup>61</sup>. COS (54) 207, 23 June 1954; DEFE 5/54.

<sup>62</sup>. COS (54) 228, 9 July 1954, report by working party; DEFE 5/53.

instruction and experiments at Poole. In his view Fremington was too distant and too large. He believed that the move could produce considerable reductions in overheads and would be to the benefit of both organisations. The COS Committee agreed. It was announced by the COS that there “*was no requirement for the Army as a whole to be trained in amphibious warfare*” . The Chiefs endorsed the conclusions of the working party that although the inter-Service nature of Amphibious Warfare should be maintained, the Royal Marines should be the parent arm. Retention of CAW was still regarded as essential, although his role regarding the control and direction of the Amphibious Warfare organisation required further investigation.<sup>63</sup>

In November 1954 Major-General Phillips reported that in his opinion the controlling authority for amphibious warfare should remain based in London along the lines of the existing AWHQ. However, he suggested a reduction in personnel of 46 percent. CAW saw little need to change his existing directive. He supported the continuing responsibility to study the technique of landing a brigade group as this was the minimum level at which a properly balanced view could be maintained.<sup>64</sup>

Phillips regarded the proposed move of the AWC to Poole as “*an eminently practicable proposition from which nothing but good can result*” . However, complete integration of SAW with ASRM was not possible due to the different functions of the two. He believed that the move could be completed before the end of 1956 and that it would result in a saving of £92,000 in personnel costs, half of which would be an absolute saving on civilian wages. Capital expenditure of £131,500 would be required at Poole, less £20,000 if it proved possible to accommodate the headquarters of the Amphibious Observation Regiment at Portsmouth. This expense was offset as War Office proposals to spend £365,000 on new construction in North Devon could be reduced by £180,000 if the move took place.<sup>65</sup> The COS were pleased with Phillips’s report and endorsed his proposals.<sup>66</sup>

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<sup>63</sup>. COS (54) 82 mtg, 14 July 1954; DEFE 4/71.

<sup>64</sup>. COS (54) 339, 28 October 1954; report by CAW; DEFE 5/55.

<sup>65</sup>. Ibid.

<sup>66</sup>. COS (54) 126 mtg, 25 November 1954; DEFE 4/74.

The AWC officially closed on 1 October 1956. Even before this closure the SAW had adapted its teaching in light of the new conditions outlined by the JPS in 1954.<sup>67</sup> A Joint Services Amphibious Warfare Centre (JSAWC) was formed at Poole by amalgamating the ASRM and SAW. The ASRM became the Assault Training Wing of the JSAWC and the SAW became the Staff Training Wing. The latter remained under the control of CAW, via the Commandant, for all policy matters.<sup>68</sup> The headquarters of the Amphibious Observation Regiment moved to Poole in spring 1957.<sup>69</sup> The break-up of the AWC at Fremington meant that there was no establishment, planned or existing, for the training of Army units in amphibious warfare in wartime. In 1950 the War Office had agreed that there was a requirement for a Combined Operations Training Centre to be set up in wartime and proposals were submitted to the three Service Ministries for the setting up of such a centre at Inverary.<sup>70</sup> In April 1952 CAW Thomas was able to report that Inverary had been accepted by the War Office and Admiralty as the site of a wartime Amphibious Operations Training Centre (AOTC), for the wetshod training of individual Army units.<sup>71</sup>

It was unlikely that the centre at Inverary could be established and made ready for training in the opening stages of a war. The AOTC was planned to be available from D+12 months. There was, therefore, a requirement for a temporary AOTC to operate until Inverary was operational. The AWC at Fremington represented the only suitable and available location. With landing ships and craft based at Milford Haven, Fremington could train Army formations as a makeshift AOTC, albeit with some limitations.<sup>72</sup> It was partly for this reason that AWHQ was strongly opposed to the proposals to break up AWC contained within the Parker Report.<sup>73</sup>

By amalgamating AWC with the ASRM in Poole the possibility of conducting any effective training of Army formations within the first twelve months of war was removed. Neither Poole nor Portsmouth

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<sup>67</sup>. AWHQ Information Letter No.5 1955; DEFE 2/1912.

<sup>68</sup>. COS (56) 322, 24 August 1956; DEFE 7/1455. Also, DEFE 7/1455.

<sup>69</sup>. DEFE 2/1914 + DEFE 2/1915.

<sup>70</sup>. COS (50) 159 mtg, 2 October 1950; DEFE 2/1574.

<sup>71</sup>. COS (52) 234. Folio 5, docket CO(o)438/5; DEFE 2/1849.

<sup>72</sup>. Folio 5, docket CO(o)438/5; DEFE 2/1849. Folio 52; DEFE 2/2062.

<sup>73</sup>. Folio 52; DEFE 2/2062. COS (53) 579.

possessed the facilities or the room for Army formation training. However, in December 1953 the CIGS had stated that there was effectively no chance of any Army formations being available for amphibious training in the first six months of war and so the facilities of an AOTC would not be required for this period. In November 1954 CAW Phillips accepted the War Office view that there was no peacetime requirement for plans to be drawn up for the AOTC at Inverary.<sup>74</sup> In any future major war Britain would be in the same position regarding facilities for military amphibious training that it had been in 1940, with none either existing or planned.

Placing the main responsibility for amphibious warfare in the hands of the Royal Marines was a progressive step. The role of amphibious warfare in defence planning had changed since 1944. The priority was now for small scale raiding operations, which would require the capabilities of amphibious specialists. There was no longer any need to plan for the amphibious training of the Army as a whole. Since 1945 amphibious capabilities had suffered from being the responsibility of no single Service. By making the Royal Marines responsible for amphibious warfare, their own independent existence was bolstered as they acquired a distinct role separate from the Army, and this gave the Admiralty a stake in the maintenance of amphibious capabilities. The lesson from across the Atlantic certainly seemed to indicate that amphibious warfare would prosper if it was the definite responsibility of one Service.

The belief that amphibious warfare might fare better if it was the prime responsibility of one Service may have encouraged Phillips in his advocacy of the Davis Report; certainly American commentators had long supported this view.<sup>75</sup> On 1 December 1954 CAW Phillips delivered a lecture to an audience at the Royal Naval College, Greenwich in which he somewhat enviously noted that the Americans had a different outlook towards amphibious warfare and the application of seapower. He explained that amphibious warfare was a naval responsibility and as such came under the Secretary of the Navy. Although intimately connected to the navy and administered by the same department, the USMC was, in fact, a fourth Service and the

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<sup>74</sup>. COS (54) 126 mtg.

<sup>75</sup>. For example see the article by Lt-Colonel Thompkins, a former USMC representative at AWC, in the December 1948 issue of *Marine Corps Gazette* p.10-21.

Commandant held equal rank to the Chief of Naval Operations. AWHQ were well aware that the USMC could devote far greater resources to the study of amphibious warfare than could the British. The USN Atlantic and Pacific Fleets each contained amphibious forces sufficient to lift, land and support a one divisional assault by the marine division and marine air wing which were integral to each Fleet.<sup>76</sup>

The British maintained close liaison with the Americans on defence matters after the War and amphibious warfare was no exception. As was the case throughout Anglo-American contacts the close wartime relationship weakened somewhat after 1945. However, the post of CCOR was maintained as part of the BJSM in Washington, and beginning in 1946 a USMC representative was assigned to Fremington. This officer's responsibilities were later broadened to include duty as a liaison officer at AWHQ.<sup>77</sup>

Particularly close relations were maintained with the Canadian Army. A Combined Operations team visited the Canadian Army Staff College, Kingston in 1947 and again in 1948. These visits were deemed to have been a great success by both participants and Canadian Army Headquarters were to request repeat visits on an annual basis.<sup>78</sup> In June 1948 Brigadier Perowne at the SCO received an invitation from the Commandant, USMC Schools, Quantico for the SCO team to give a demonstration there during its scheduled trip to Canada in the autumn.<sup>79</sup> Perowne was glad to accept the invitation but was forced to add the "*somewhat embarrassing condition*" that the trip could not involve any dollar expenditure.<sup>80</sup> It is an unfortunate comment on Britain's position in the late 1940s that Canada and the United States were forced to meet the cost of the visiting instructional teams.

The Americans were clearly impressed by the short demonstration they had been given in 1948. Rear Admiral Thomas B. Inglis (USN) extended an invitation for another visit to Quantico in 1949 upon the

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<sup>76</sup>. Transcript of lecture given on 1 December 1954; DEFE 2/1900.

<sup>77</sup>. Fergusson, *Watery Maze*, p.128-130. **British Post-War Representation in the United States**; DEFE 1/1346.

<sup>78</sup>. Folio 1, docket CR 607/47; DEFE 2/1576. COS (48) 30, 24 March 1948; DEFE 5/7.

<sup>79</sup>. Folio 43, docket CO607/47; DEFE 2/1576.

<sup>80</sup>. Folio 48, docket CO607/47; DEFE 2/1576.

completion of the SCO visit to Kingston.<sup>81</sup> A third visit to Quantico, planned for November 1950, had to be abandoned due to the partial mobilisation of the Marine Corps Reserve in response to the war in Korea. Nevertheless, the visit to Canada went ahead and there was American participation in the general discussion.<sup>82</sup> The practice of sending instructional teams to Quantico and Fremington on alternate years began in 1951 with a visit by the USMC to the AWC. COHQ/AWHQ was kept well informed of developments in the United States. Monthly reports from the CCOR in Washington were supplemented by the growing liaison with the USMC from 1948 and the first visit of the SCO team to Quantico. By the early 1950s there was USMC representation at AWHQ and Fremington, and British representation on the directing staff at Quantico.<sup>83</sup>

The Combined Operations organisation maintained contacts with the armed forces of a number of other countries. Britain had played a major part in the development of amphibious warfare during the Second World War and had much to offer its Commonwealth and European friends and allies in this field of warfare. The French requested British help in order to set up their own School of Combined Operations at Arzew near Mers el Kebir in Algeria.<sup>84</sup> Allied and Commonwealth officers attended courses at the AWC while Combined Operations instructional teams paid occasional visits to promulgate British techniques. For example, in 1951 a group of between thirty and forty Belgian commandos visited the United Kingdom to learn more about amphibious warfare. CAW was invited to send an instructional team to the NATO Defence College and a team from the USMC visited Fremington.<sup>85</sup> In November 1950 representatives from COHQ attended amphibious exercises at Karachi and Quetta.<sup>86</sup> However, with the exception of the United States, Britain had little to learn from liaison with other countries. No other country had done so much to develop the technique and equipment of amphibious warfare. The doctrine adopted by other countries reflected that laid down by Britain and America. COCOS was against

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<sup>81</sup>. Folio 26 + 99A, docket 607/4; DEFE 2.1577.

<sup>82</sup>. Folios 11,71,77 and 84, docket CO606/50; DEFE 2/1578.

<sup>83</sup>. DEFE 2/1900.

<sup>84</sup>. ADM 1/21179, **Collaboration with France, 1947-1948**.

<sup>85</sup>. COS (51) 41 mtg, 15 March 1951; DEFE 4/40. COS (51) 152 mtg, 28 September 1951; DEFE 4/47.

<sup>86</sup>. COS (50) 122 mtg; 2 August 1950; DEFE 4/34. COS (50) 142 mtg, 4 September 1950; DEFE 4/35.



foreign attendance at some courses and exercises as this might prejudice the willingness of the Americans to keep the British fully up to date with new techniques and equipment.<sup>87</sup>

Differences in British and American technique were not great. American doctrine was heavily influenced by their wartime experience in the Pacific. COHQ attributed this largely to the fact that responsibility for the formulation of doctrine was vested in the Navy and Marine Corps:

Their outlook is undoubtedly coloured by their island-capturing operations of the Pacific war. They make less use of the means of achieving a very rapid initial penetration and a quick build up such as is required in a Continental operation. I refer particularly to the use of tanks, artillery and sufficient engineer effort to avoid delays in the early phase of the assault. These are brought in much later than is the case in our method. The assault is brought in by infantry, supported by thin skinned LVT. The swimming tank is not used at all.<sup>88</sup>

Apart from the more widespread use of LVTs and the lack of swimming tanks and specialist engineer vehicles for beach clearance work, the only major differences in technique were those of command structure, beach organisation and naval gunfire support.<sup>89</sup> The key difference between the United States and Britain was that of resources, and nowhere was this more apparent than with the development of helicopters for assault operations.

Britain undertook little or no development of rotary wing aircraft during the War, In 1945 a small number of Sikorsky Mk.4 and Mk.6 helicopters were procured from the United States. With the end of the Lend-lease arrangement it was found impossible to retain and service these aircraft and all but a small number, kept for experiment and development work, were returned. The potential use of helicopters in amphibious operations was anticipated in Britain as early as 1945, although initially their role was expected to be limited to evacuation of casualties, transport of urgently required equipment

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<sup>87</sup>. ADM 1/21178.

<sup>88</sup>. COS (49) 177, 4 April 1949, report by COCOS; DEFE 5/13.

<sup>89</sup>. Ibid. COS (47) 11 mtg, 15 January 1947; DEFE 4/1. DEFE 2/1850 + DEFE 2/1900. Also see *Marine Corps Gazette*, particularly Lt-Colonel Tompkins, "British Combined Operations" December 1948; Lt-Colonel A.J.Stewart, "Strengthen the Beach Assault", August 1949; Lt-Colonel Tompkins, "Urgent - Land the Tanks", March 1951.

and reconnaissance and communication duties.<sup>90</sup> The limitations of the aircraft available to Britain in the 1940s led both the Admiralty and COHQ to underestimate the potential of helicopters in the assault. In May 1946 the Admiralty position was that:

In the present state of their development, their Lordships are doubtful whether the use of helicopters in combined operations would be economical on account of the space required for their stowage in landing ships ..... Their Lordships also think it problematical whether the use of helicopters for landing personnel and stores would be worth while as the occasions on which they would be required to supplement or replace water transport would probably be rare.<sup>91</sup>

In April 1948, when discussing a paper prepared by the Policy Group in COHQ, the Executive decided that the unloading of stores during the assault by using helicopters “*could not be regarded as a feasible proposition within the foreseeable future*” .<sup>92</sup>

Meanwhile, the United States was pressing ahead with the development of helicopters and their use in the assault. In June 1948 COHQ received a report from CCOR of an exercise held in May which had envisaged the landing of a Regimental Combat Team flying from aircraft carriers in 184 helicopters. Five helicopters were available for the exercise, which was the first of its kind. They flew from the escort carrier USS *Palau* . CCOR noted that more research was required before a satisfactory design was achieved but he was optimistic that current helicopters could play a useful role in resupplying urgent stores and in casualty evacuation.<sup>93</sup> In 1947 the first United States Marine helicopter Squadron HMX-1 was formed under Colonel E.C.Dyer. Tactical tests by HMX-1 proved the viability of the helicopter as a weapon of amphibious warfare. In May 1949 a group of about 40 Congressmen were treated to a demonstration landing by a platoon of Marines in eight HRP-1 helicopters at Quantico. It was explained to the distinguished guests

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<sup>90</sup>. **A Note on Helicopters**, loose minute in docket CR 1479/45; DEFE 2/1697. Folio 1, docket CR 1479/45; DEFE 2/1697.

<sup>91</sup>. Folio 10, docket CR 1479/45; DEFE 2/1697.

<sup>92</sup>. **Use of Helicopters During Assault**, paper by Policy Group, COHQ, folios 3+4, docket CO 855/48; DEFE 2/1697. 13th Meeting of the Executive, docket CO 855/48; DEFE 2/1697.

<sup>93</sup>. Folio 1, docket CO 1206/48; DEFE 2/1641.

that helicopters were faster, more versatile and might prove less vulnerable than landing craft.<sup>94</sup>

The USMC, like the Combined Operations organisation in Britain, had undergone a period of doubt and uncertainty following the War. Facing problems of credibility in the shadow of the atomic bomb, the Marines turned to helicopters as a means of bringing speed, dispersion and flexibility to amphibious warfare. While their British counterparts were struggling to maintain the viability of the remains of the wartime assault fleet, those charged with studying amphibious warfare in America were pressing ahead with radical new techniques. Exercises with helicopters in 1948 and 1949 proved their potential and in 1951 the Marines received their first Sikorsky HRS troop carrier, the first helicopter acquired by the USMC in large numbers. Further investigations by the Marine Corps brought proposals for specialist helicopter carriers, able to operate helicopters in the assault. Operations in Korea proved that helicopters could make a valuable contribution in war. Although in 1951 the Chief of Naval Operations allowed the marine proposals to be evaluated by the Atlantic Fleet, it was not until 1955 that a conversion of an existing ship to a helicopter carrier was undertaken.<sup>95</sup>

In May 1955 the mothballed 10,000 ton escort carrier *Thetis Bay* was towed to the Philadelphia naval shipyard for conversion. Recommissioned in July 1956, the ship could accommodate a 1,000 man battalion in addition to its own crew of 500. *Thetis Bay* could normally operate 20 HRS type helicopters and was designated CVHA-1 (HA for helicopter assault). Conversion of the 11,000 ton escort carrier *Block Island* began in 1957, although this was never completed as funds were redirected to purpose built amphibious ships. Work on the new *Iwo Jima* class LPH began in April 1959.<sup>96</sup> Displacing 18,000 tons full load and 592 feet long, the *Iwo Jima* could embark 2,000 soldiers and up to 30 HRS type helicopters. In order to fill an immediate requirement for helicopter carriers in the Far East three wartime *Essex* class carriers, *Boxer*, *Princeton* and

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<sup>94</sup>. Lt Roy L. Anderson, "The Marine Corps and the Helicopter", *Marine Corps Gazette*, August 1948 p.13-19.

<sup>95</sup>. Robert B. Asprey, "The Fleet Marine Force in the early 1950s", in Merrill L. Bartlett, *Assault from the Sea: Essays on the History of Amphibious Warfare*, (Annapolis: Naval Institute Press, 1983) p.354-359. Polmar + Mersky, *Amphibious Warfare*, chapters 15 + 16.

<sup>96</sup>. In LPH, L was the prefix for all large landing ships, P indicated personnel and H represented helicopter capacity.

*Valley Forge*, were hastily converted for helicopter operations. *Tarawa* operated as a helicopter carrier but was never redesignated as LPH. These ships were not as efficient in the LPH role as the purpose built vessels but remained in this role until sufficient *Iwo Jima* class ships were available,<sup>97</sup>

AWHQ were fully aware of the increasing interest of the Americans in helicopter operations. In May 1951 CAW Thomas reported that the development of helicopters in America and their operational use in Korea was being studied. By October 1951 he saw a requirement for heavy load carrying helicopters for transporting assault troops and the carriage of stores.<sup>98</sup> Thomas's successor as CAW, Major-General Phillips, was keen for the Commandos to conduct training with helicopters and his enthusiasm was shared by the CGRM, Lieutenant-General J.C. Westall and Brigadier Moulton at 3 Commando Brigade. Phillips hoped to be able to provide training for 3 Commando with No.845 Squadron, which was equipped with S.55 helicopters. He sought the support of the naval Commander-in-Chief Mediterranean, Admiral Mountbatten, for helicopter training, preferably from aircraft carriers. Despite the goodwill of the 1SL and his own personal approval, Mountbatten and his successor, Sir Guy Grantham, were unable to provide such training. Helicopter resources within the Navy were limited and what was available was devoted to anti-submarine warfare or air-sea rescue. Fear of wearing out the limited supplies of engines and restrictions on the use of American supplied helicopters, ruled out their use in amphibious training.<sup>99</sup>

British use of helicopters in a counter-terrorist role in Malaya further highlighted the utility of these machines, and further restricted their availability. In December 1954, in response to a request from CAW, the RAF reported that due to commitments in Malaya there was little chance of RAF participation in any helicopter training for amphibious warfare.<sup>100</sup> Although CCOR kept CAW informed of American helicopter activities and developments, he was anxious that Britain should not have to rely entirely on the Americans for doctrine.<sup>101</sup> In

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<sup>97</sup> Ibid. David Steigman, "Amphibious Forces" in Robert Gardiner (ed), *Navies in the Nuclear Age: Warships Since 1945*, (London: Conway Maritime Press, 1993) p.110-120.

<sup>98</sup> COS (51) 268, 4 May 1951, report by CAW; DEFE 5/31. COS (51) 601.

<sup>99</sup> Folio 1+2, docket AW 502/4/55; DEFE 2/1891. DEFE 2/1890 + DEFE 2/1891 *passim*. COS (54) 372, 2 December 1954, report by CAW; DEFE 5/55.

<sup>100</sup> COS (54) 132 mtg, 15 December 1954; DEFE 4/74.

<sup>101</sup> COS (54) 372.

1955 two platoons from 42 Commando conducted a landing in nine helicopters from 705 RN Air Squadron during *Runaground*, an annual amphibious demonstration conducted by the Royal Marines at Portsmouth.<sup>102</sup> This demonstrated interest in the use of helicopters for amphibious operations, but serious training would not be undertaken for another year.

The acceptance of the proposals of the Davis Working Party brought to an end the concept of amphibious warfare as primarily an inter-Service responsibility. AWHQ continued in existence until the early 1960s but from 1955 the Royal Marines assumed the main responsibility for amphibious warfare. In the early post-War years thinking within the Combined Operations organisation had still been very much influenced by the wartime experience in Europe. The organisation recommended by the RAW Committee in 1944, and reflected in postwar proposals for CTCs and the Assault Training Force, was based upon the need to provide large scale training facilities in order to prepare the Army as a whole for major assaults as the prelude to a Continental land campaign. Financial crises and the need to run down forces in the late 1940s caused combined operations requirements and aspirations to be toned down but did not bring an immediate reassessment of their primary role. In the 1950s, with continued pressure on the defence budget and the changed strategic environment following the development of the H-bomb, there was an increasing preoccupation with the problems of supply and maintenance under conditions of nuclear attack and with raiding and the small scale assault. Under these circumstances it made little sense trying to maintain an amphibious warfare organisation that had its roots in the large scale landings of the last war.

Although representing a fundamental reversal of previous policy and ideas, the move to make amphibious warfare essentially a single Service responsibility was not as revolutionary to British practice as may at first seem the case. Indeed, the RAW Committee had considered the possibility of placing the main responsibility for combined operations in the hands of the Royal Marines and only rejected it as this did not fit into the preconceived requirement it had for operations on the *Overlord* model. The main reason why the

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<sup>102</sup>. "Demonstration Runaground" in *Globe and Laurel*, August 1955.

Committee had rejected the notion of a specialist corps, such as the USMC, had been that such a corps would become redundant following an assault as it would be unable to fit into the framework of operations which had to be undertaken by the Army supported by the RAF.<sup>103</sup> If, however, the assault was only to be a raid or similar operation, then this objection was no longer valid and the Marines would in fact be able to bring a level of readiness and expertise to amphibious warfare that could not be matched by the Army. By giving the Royal Marines prime responsibility for amphibious warfare their specialist nature was reinforced, weakening any claim that they should be incorporated into the Army. This gave the Admiralty an interest in maintaining and promoting amphibious capabilities. This interest was to grow in the late 1950s as the further ramifications of Britain's changing strategy were felt. With less emphasis placed on the ability to fight a conventional war in Europe, the Admiralty was to turn to amphibious warfare as one means of justifying a large capable fleet.

Since 1945 the amphibious warfare organisation had tried its best to maintain and develop amphibious techniques. However, like the equipment those techniques were rooted in past practice. Although aware of the revolutionary application of helicopters in the assault being developed in the United States, AWHQ and the AWC remained spectators of, rather than participants in, these new developments. In June 1955, when Britain's amphibious warfare potential still rested on the ageing ships and craft of the AW Squadron, AWHQ received a report from the CAW's representative at the BJSM, which illustrates how far behind America Britain had fallen:

The amphibious methods of World War Two have been completely abandoned as no longer practicable. By escaping from, so to speak, conventional progress, they have been able to make a fresh start in all aspects of amphibious warfare to suit the nuclear age; as an example they no longer worry about tank flotation problems, but are much more concerned with helicopter air to ground missiles.<sup>104</sup>

When the need for an amphibious landing arose in 1956 the effect of a decade of neglect would be starkly illustrated.

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<sup>103</sup>. See chapter two, page 49.

<sup>104</sup>. Folio 42, docket AW 502/4/55; DEFE 2/1891.

## Chapter Four: Table One

### Admiralty Green List for 3 September 1945

#### Ships, Craft and Barges

LSC	1	LCF(3)	12	LCA	1,380
LSD	4	LCF(4)	15	LCA(HR)	35
LSE(LC)	5	LCG(L)(3)	15	LCA(OC)	8
LSE(LS)	2	LCG(L)(4)	16	LCC	1
LSF	1	LCG(M)	48	LCE	4
LSG	3	LCH	18	LCM(1)	307
LSH(L)	4	LCI(L)	170	LCM(3)	382
LSI(M)	4	LCI(S)	27	LCM(7)	109
LSI(S)	3	LCQ	21	LCN	60
LSI(H)	3	LCS(L)(2)	5	LCP(L)	165
LSS	1	LCT(1)	4	LCP(SY)	6
LST(1)	2	LCT(2)	21	LCP(R)	286
LST(2)	94	LCT(3)	167	LCP(M)	56
LST(3)	40	LCT(4)	475	LCP(S)	145
MS(LC)	1	LCT(5)	113	LCS(M)(3)	135
MS(LC)	1	LCT(6)	2	LBE	2
		LCT(8)	1	LBF	2
		LCT(E)	18	LBK	1
		LCT(R)	39	LBO	35
		LCV	147	LBV(1)	11
		LCV(P)	350	LBV(2)	5
				LBW	

#### Amphibians

LVT(2)	11
LVT(3)	40
LVT(4)	2
DUKW	51

## **CHAPTER FOUR**

### **AMPHIBIOUS EQUIPMENT**

A wide variety of specialist amphibious vessels were developed during World War Two and many of these were deployed in large numbers by the British. Britain had pioneered the development of many key ships and craft, notably the LST, the LCT, the LCM, the LSI and the LSH. Despite a surplus of amphibious resources in 1945, deficiencies soon began to appear in Britain's post-war amphibious forces. The constant need for economies in the defence budget caused a series of planned construction projects to be shelved and then abandoned. Lack of priority doomed all but the most modest projects to failure. In these circumstances it was inevitable that Britain's amphibious fleet would begin to show signs of wear and tear, and would eventually become obsolete. The efforts of COHQ/AWHQ ensured that the issue of the replacement and modernisation of existing amphibious vessels was constantly before the COS, but without adequate finance and with the Royal Navy at best apathetic towards the issue, relatively little could be achieved.

At the time of the official Japanese surrender on 3 September 1945 Britain had an impressive array of amphibious vessels. The Admiralty Green List for that day lists over 5,000 ships, craft and landing barges of all varieties and over 100 amphibious vehicles, see Table One.<sup>1</sup> A number of these were new vessels built for planned operations in the war against Japan. These, including the LST(3), LCT(8) and LCM(7) had seen little or no action and were to form the nucleus of the post-war amphibious fleet. However, others, notably the earlier LCTs and LSTs as well as many of the small craft, had seen very extensive use and were unfit for post-war service. Many craft were scrapped or left to rot in low priority reserve. A number of ships, including the LSIs and LSHs, had been converted from merchant ships and were now required back in trade. In addition a very large number of vessels, including the LST(2)s, LSDs, LCIs and numerous small craft were American built and loaned to Britain

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<sup>1</sup>. Admiralty *Green List* for 3 September 1945; ADM 210/17.



under the terms of Lend-Lease. Under this agreement these vessels had either to be returned or paid for. With dollars scarce in post-war Britain, it was inevitable that the vast majority would be returned to the United States.

In 1944 the RAW Committee anticipated maintaining enough ships and craft in peacetime to lift a division. The requirement for peacetime lift proposed by the JPS and agreed by the COS in January 1946 was less ambitious. As a planning target the COS outlined a requirement for sufficient lift for a brigade group.<sup>2</sup> At the time the report was submitted all the necessary ships and craft existed under British control. However, the force recommended included a number of American Lend-Lease vessels, most notably two LSD and six LCH, and also an LSH and LSI(L), both of which the Ministry of Transport had hoped to return to trade. In view of the cost of keeping Lend-Lease ships, the COS agreed that they should only be retained if absolutely essential. They decided that the requirement could be limited to only one LSD and one LCH. In addition, while the LSH was considered a definite requirement, it was agreed to dispense with the LSI, as new developments in launching assault craft from LSTs appeared to put the requirement for this ship in some doubt.<sup>3</sup>

In view of the special characteristics of LST, the COS agreed to retain all available British LST, pending a full review of Imperial requirements.<sup>4</sup> At the end of the war Britain had 136 LST operating in their original role. Of these two were obsolete LST(1), 94 were LST(2) and the remaining 40 were LST(3).<sup>5</sup> The LST(2) were American built Lend-Lease ships. Britain had received a total of 115 LST(2) from the United States and this class had formed the backbone of all Allied landings after their operational debut in 1943.<sup>6</sup> By autumn 1946 all LST(2) had been returned to the United States where they were either paid off or transferred to the navy.<sup>7</sup>

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2. COS (46) 18 mtg, 1 February 1946; CAB 79/44. For shipping required to lift a division or a brigade see chapter two, page 51 + 54.

3. Ibid.

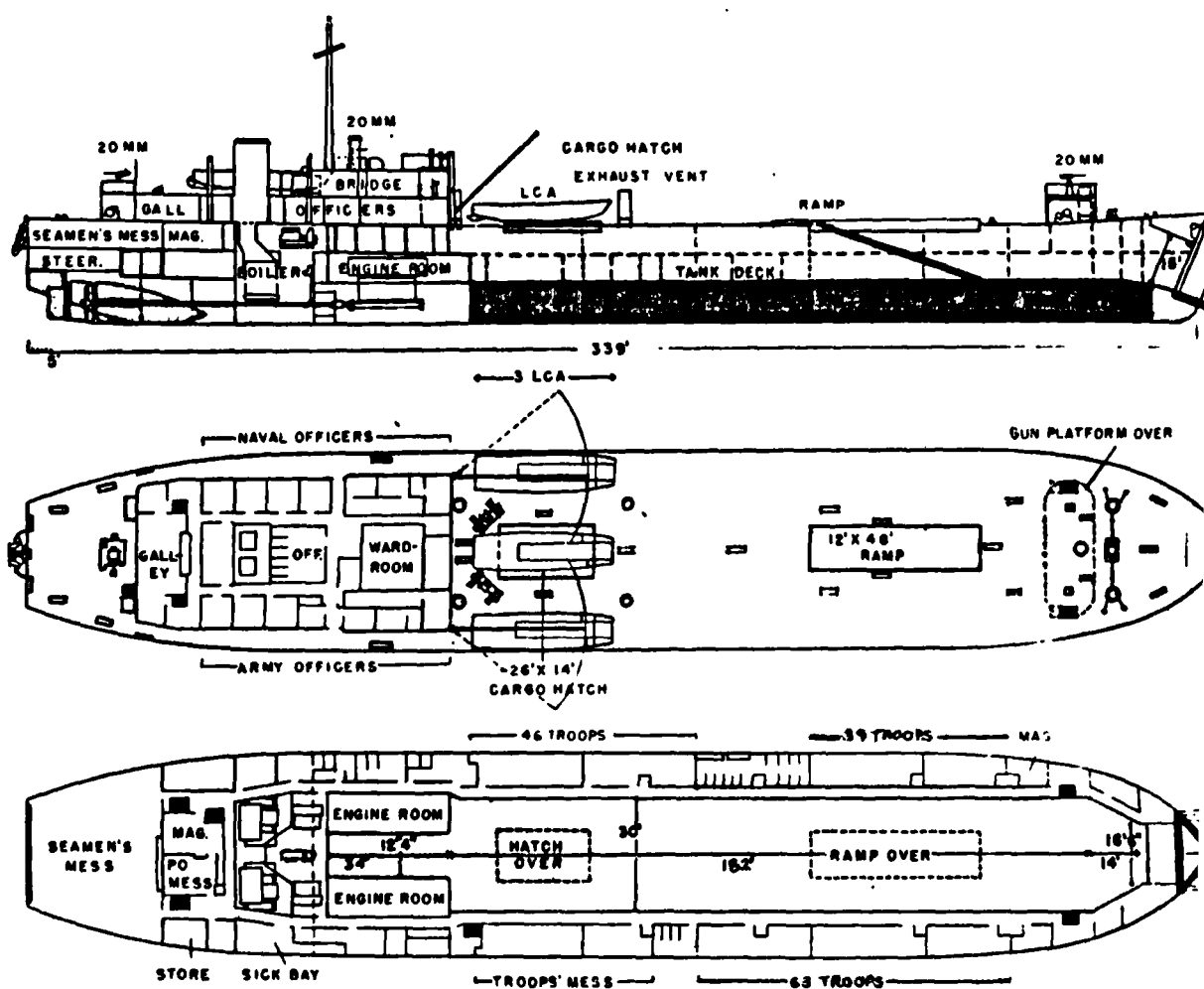
4. Ibid.

5. ADM 210/17.

6. DEFE 2/1327, *Landing Craft - Notes on Development of.*

7. Macdermott, *Ships Without Names*, p.92 and chapter 14.

**Figure One. Landing Ship, Tank (Three).**



In December 1943 Britain ordered 45 new LST from British yards and a further 35 from Canada to supplement the allocation of LST(2) from the United States. The staff requirement for this ship, the LST(3), had been for a vessel with the same beaching characteristics as the LST(2) but with a higher speed, slightly larger bow doors and a greater height between decks. Unfortunately, with wartime resources stretched, the result was something of a compromise. The only available engines were steam reciprocating engines, originally designed for frigates. Although providing the LST(3) with greater speed than its American counterpart these engines were unsuitable due to their excessive weight and the implications this had for draught. As early as December 1945 the Director of Combined Operations Material (DCOM) at the Admiralty was noting that the LST(3) was to some extent a makeshift design built under wartime conditions. It was pointed out that it did not meet the original staff requirements in respect of draught or speed and that therefore a new improved LST was required.<sup>8</sup> Neither British nor Canadian shipyards were equipped for producing all welded ships and the need to use riveting added weight and thus draught. The detailed design was not completed until January 1944. Towards the end of 1944 a repeat order for 36 ships from Canada was issued, although the end of the war saw that order cancelled. The first LST(3)s were completed in Spring 1945. In total 25 British and 16 Canadian built ships were delivered to the Royal Navy before the end of the war with 10 British and 10 Canadian built vessels delivered after its end, see figure one.<sup>9</sup>

Originally called a "*Transport Ferry*", the LST(3) was powered by twin screw steam reciprocating engines. At full power when loaded it could manage over 13 knots. Endurance was 8000 miles at 11 knots or 1000 miles when loaded for a landing. Extreme length was 345 feet ten inches and the beam was 54 feet. When loaded for beaching, displacement was 3,065 tons with a draught for'd of four feet seven inches and 11 feet six inches aft. The ship carried either two LCAs or two boats on gravity davits and three LCAs could be carried on the upper deck, hoisted on board by 15 ton derricks, one either side of the bridge superstructure. Two 24 feet pontoon causeways could be carried, one on either side of the ship, which was fitted with bars welded to the sides for this purpose. In addition to the LCA, 15

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<sup>8</sup>. R.C.Todhunter to COHQ, 2 December 1945, folio 15 docket co.413/45; DEFE 2/1341.

<sup>9</sup>. Macdermott, *Ships Without Names*, p.86-87. Folio 32; DEFE 2/1327.

lorries could be carried on the upper deck. The lower deck had space for 15 forty ton tanks or 27 three ton lorries with a maximum height of 16 feet. A ramp leading from the upper deck to the tank deck replaced the elevator used in the LST(2). The vehicles could be launched through bow doors over a 25 foot ramp capable of bearing 65 tons with both ends supported. With a crew of five officers and 120 ratings, the LST(3) could accommodate 150 soldiers and their officers.<sup>10</sup>

A number of LST(3) were converted to enable them to operate in specialist roles. Two ships were equipped to operate as Landing Ship, Tank (Carrier) (LST(C)) and two more were adapted to operate as administrative and parent ships of an assault force (LST(Q)), see figures two and three. In the LST(Q) the function of landing ship lapsed completely, as the vessel was primarily an administrative headquarters ship. The requirement for LST(C) grew out of the wartime shortage of carriers of small craft. This ship could carry five LCM on rails above its upper deck. These LCM could be hoisted out by derrick in seven hours. As such the ship was unsuitable for operations. A swell as low as one foot made the procedure dangerous to personnel as well as to the craft and the mother ship. In 1948 COCOS Wildman-Lushington reported that although one each of the LST(C) and LST(Q) were immediately available, the other two ships were employed on special service and would require reconversion in a dockyard before operating in their intended role.<sup>11</sup>

The JPS report of January 1946 anticipated the use of LST as infantry carriers. It introduced a requirement for the conversion of 10 LST(3) to Landing Ship, Tank (Assault) (LST(A)) able to accommodate 240 men on the top deck. It was estimated that four LST(A) would provide the equivalent personnel lift of one LSI(L). The 1SL, Admiral John Cunningham, considered that the Assault Training Force would need 12 LST(A) to operate on brigade scale, bringing the overall LST requirement for the force to 33. He recommended that the LST(3) allocated to the CTEs and School of Combined Operations should also be converted to LST(A), producing an overall requirement of 17. In anticipation of approval by the COS,

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<sup>10</sup> Details of Combined Operations Landing Ships, DEFE 2/764. Amphibious Warfare Ships and Craft, October 1954; DEFE 2/1799.

<sup>11</sup> Ships Cover CD 739 at the National Maritime Museum, Woolwich. DEFE 2/764 + DEFE 2/1799. COS (48) 90, 4 August 1948, memo by COCOS; DEFE 5/8.

The image contains three detailed diagrams of the USS LST-1163, a Landing Ship, Tank (LST).

- Top Diagram (Side Elevation):** Shows the ship's profile from the bow to the stern. Key features labeled include the bow, 20 mm gun, 15 OUT BOOM, 20 mm gun, and various internal compartments such as STEER, TROOPS, HEAD, MESS, ENGINE ROOM, and PILOT.
- Middle Diagram (Top-Down Deck Plan):** Shows the layout of the upper deck. Labeled areas include GALLEY, HEAD, MESS, CREW, and another MESS area.
- Bottom Diagram (Bottom-Up Hull Plan):** Shows the layout of the lower hull. Labeled areas include GENERATOR RM, STORE, BATTERY RM, W/T COMP, ENGINE RM, and various other compartments.

the Navy had already allocated 33 LST to the Assault Training Force for planning purposes.<sup>12</sup>

As a result COHQ, in conjunction with the War Office, prepared staff requirements for a conversion to LST(A). After discussion with the Admiralty it was estimated that in fact five LST(A) should replace one LSI(L), meaning that a total of 15 were required for the Assault Training Force.<sup>13</sup> The staff requirements as agreed between COHQ, the War Office and the Admiralty described the LST(A) as follows:

The function of the LST(A) is to carry assault troops on an ocean passage and to land them in the landing craft carried on board. Five LST(A) are required to carry an assault battalion and appropriate ancillary units.

Accommodation was to be provided for 26 officers and 329 other ranks in addition to the ship's company. Carrying six LCA and two LCP (as ship's boats) on davits the LST(A) was to retain the ability to beach and land cargo directly onto the shore.<sup>14</sup>

Another key part of Britain's post-war amphibious fleet was the LCT(8). At the end of the War the Royal Navy deployed 783 LCT. Of these over half were old LCT(4), unsuited for an ocean passage.<sup>15</sup> Designed for long range operations against Japan, the LCT(8) had just begun to be delivered by the end of the War. At 225 feet the LCT(8) was 38 feet longer than the LCT(4), although it drew only 45 inches of water. Accommodation and supplies for one week's passage was provided for 45 troops in addition to the crew of 22. Six LCA could be embarked in calm weather by flooding the tank space. The whole process of flooding, embarkation and pumping out took about three hours. With a maximum speed of 12 knots the LCT(8) could travel 2,500 miles at 10 knots, see figure four.<sup>16</sup> According to the JPS, Britain required a total of 25 LCT(8).<sup>17</sup> The Royal Navy had 30 such craft which left an adequate safety margin. The non-ocean going

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<sup>12</sup>. COS (46) 128, 11 June 1946, memo by ISL; CAB 80/54.

<sup>13</sup>. CD 739(A) at the National Maritime Museum, Woolwich. **Conversion of LST(3) to LST(A)**; DEFE 2/1612.

<sup>14</sup>. Staff Requirements for LST(A), November 1946; in DEFE 2/1612.

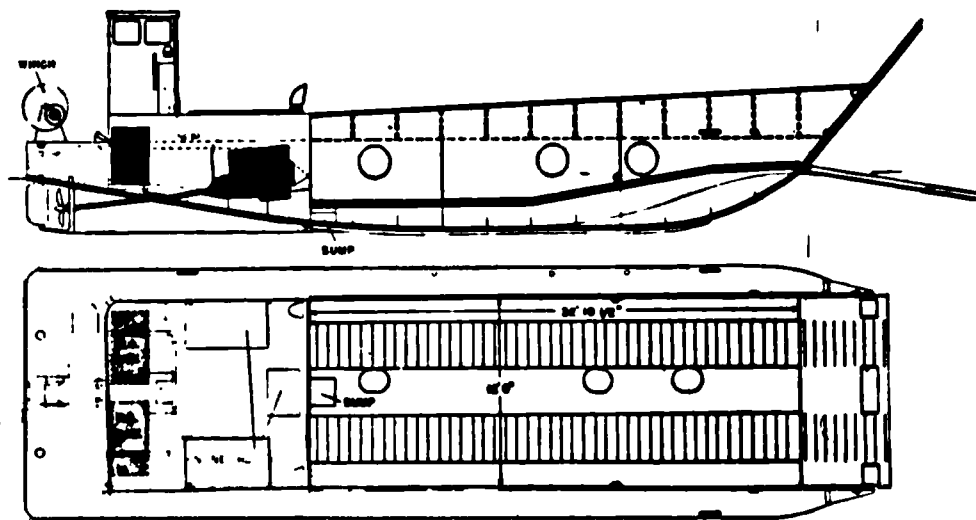
<sup>15</sup>. ADM 210/17.

<sup>16</sup>. Ladd, *Assault from the Sea*, p.104-6. **General Information Book on the LCT(8)**, ADM 234/529.

<sup>17</sup>. JP (45) 259, 26 January 1946; CAB 84/75.

**Figure Five. Landing Craft, Mechanised (Seven).**

**LANDING CRAFT, MECHANIZED (MARK 7) LCM (7)**



wartime craft were disposed of, although a small number of LST(4) were retained for use by a naval flotilla on the Rhine.<sup>18</sup>

The third major component of Britain's post-war amphibious forces was the LCM(7). Like the LST(3) and LCT(8), the LCM(7) was developed towards the end of the War and was an enlarged version of the earlier LCM(3). Capable of embarking a 35 ton tank, the LCM(7) weighed 28 tons unloaded and as such was too heavy to be carried on davits. With a maximum speed of nine knots the LCM(7) had an endurance of 150 miles at 7 knots and so required a carrier for ocean voyages. The craft had a loaded draught of three feet eight inches, see figure five.<sup>19</sup>

All the amphibious ships and craft operated by the Royal Navy after the War had been built to wartime specifications to meet specific wartime needs. The reality of war meant that very often inferior materials and techniques had to be employed in ship building and this affected the amphibious fleet as it did the wider navy. Lack of welding facilities meant that a number of LCT(8) had riveted hulls. The riveted LCT(8) was about 30 tons heavier than the all welded craft and this added over an inch and a half to draught.<sup>20</sup> In June 1947 CCO reported that "*nearly all*" Britain's specialist assault shipping was either obsolete or obsolescent, and that even the ships and craft built towards the end of the War were constructed under emergency conditions and failed to meet staff requirements. He called for the construction of a prototype vessel capable of launching the heaviest army vehicle when equipped with flotation devices and also of beaching and discharging vehicles without the use of a port.<sup>21</sup> In June 1946 he had informed the COS that without an LSI(L) there would be no assault lift available until the LST(3) had been converted to LST(A).<sup>22</sup> He now called for the conversion of LST(3) to LST(A) to be given high priority and pressed for the provision of an LSH and the construction of an LSD in line with the recommendations for the Assault Training Force approved the previous year.<sup>23</sup>

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18. JP (48) 123, 18 December 1948, given at annex to COS (48) 177 mtg, 10 December 1948; DEFE 4/18.

19. **Allied Landing Craft of World War Two.** DEFE 2/1799.

20. ADM 234/529.

21. COS (47) 129(0), 14 June 1947, memo by CCO; DEFE 5/4.

22. COS (46) 96 mtg, 21 June 1946; in CAB 79/49.

23. COS (47) 129(o).



The JPS laid down the requirement for headquarters ships and craft for the brigade group lift as one LSH(Command) and 6 LCH. There were 16 LCH available but as these were all Lend-Lease vessels the COS agreed that only one would be retained.<sup>24</sup> LCH No.243 was purchased for instructional duties at the Combined Signal School at a cost of \$95,000. The LCH was considered by both the Admiralty and COHQ to be vital for future combined operations instruction and development. It was estimated that it would take at least three years to design and construct an alternative British craft.<sup>25</sup> The operational role of the LCH was to act as tactical headquarters for a battalion in the assault. Unfortunately LCH No.243 was a wartime craft and was rapidly deteriorating. It was soon considered unfit for use in bad weather or for an ocean crossing.<sup>26</sup>

The LSH(C) was to accommodate force commanders and their staffs on the scale of an assault by division and to provide them with all the necessary facilities for exercising command and control excluding Air Defence Control, which was the responsibility of RAF shore bases or of an Air Defence Control Ship. Of the two available wartime LSH, *Bulolo* and *Keren*, it was eventually decided to convert the latter to LSH(C) at an estimated cost of £875,000. The decision was approved by the COS on 25 September 1946. It was anticipated that if taken in hand in April 1947 *Keren* could be completed at Devonport by April 1948.<sup>27</sup> Despite pressure from COHQ, this conversion was not undertaken. In April 1948 the 1SL recommended that *Keren* be disposed of. He noted that the ship had seriously deteriorated and that even with an increased care and maintenance party this deterioration would tend to increase. A new LSH would eventually be required whether or not *Keren* was retained and in any case the ship could not be manned before 1952 at the earliest. The Navy felt that the retention of this 18 year old ship could not be justified. Whilst regretting the loss of valuable training and the experience to be gained from operating such a ship, COCOS was reluctantly forced to agree with the Admiralty.<sup>28</sup>

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<sup>24</sup>. COS (46) 18 mtg.

<sup>25</sup>. COS (46) 260, 23 November 1946, memo by 1SL; CAB 80/55.

<sup>26</sup>. Folio 3; DEFE 2/1601.

<sup>27</sup>. Summary of past policy, minute 11; DEFE 2/1642. Also see DEFE 2/1648.

<sup>28</sup>. Letter dated 7 November 1947 from COHQ to Admiralty, folio 15; DEFE 2/1642. COS (48) 39, 2 April 1948, memo by 1SL; DEFE 5/7. COS (48) 52 mtg, 14 April 1948; DEFE 4/2.

Although agreeing to the disposal of *Keren*, COHQ pressed for a substitute. It was suggested that a frigate suitably fitted out as an LSH(S) should be brought into commission for the battalion lift then under consideration by the COS. Two further frigates could be earmarked specifically for Combined Operations and brought forward from reserve in an emergency.<sup>29</sup> In reply the Admiralty noted that three *River* class frigates converted to LSH(S) during the War had been so earmarked but that manpower considerations prevented their being commissioned.<sup>30</sup> In the event the frigate HMS *Meon* was refitted as LSH(S) to act as a force commander's headquarters during a small scale assault and in 1951 commissioned into the AW Squadron. Another *River* class frigate, HMS *Waveney*, was also refitted but spent the next decade in reserve. The third ship was not converted.<sup>31</sup>

During the War the Royal Navy had operated four American built LSD.<sup>32</sup> The JPS recommended the retention of one of these for the post war Assault Training Force. This would be sufficient to maintain the craft of the force and would in addition be able to lift and administer the LCM and certain ancillary units. The LSD was the only vessel able to transport minor landing craft in any quantity (20 LCM and 38 LCA) and its loss would mean the provision of extra LST and transport ships.<sup>33</sup> The COS agreed that it would be desirable to purchase an LSD from the United States. The Americans wanted £750,000 for HMS *Oceanway*, the desired ship. The Admiralty preferred to build a new ship, estimating that to build a new British LSD would cost only £650,000 and that this vessel could be ready by 1952, the time at which they believed it could be manned. This option was especially desirable as by 1952 HMS *Oceanway* would be over seven years old and in need of refit and large supplies of American spare parts.<sup>34</sup> The COS endorsed the Admiralty decision. Admiral McGrigor stated that on normal priority it would take three years to

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<sup>29</sup>. Folio 15, DEFE 2/1642.

<sup>30</sup>. Folio 17, DEFE 2/1642.

<sup>31</sup>. Grove, *Vanguard to Trident*, p.181.

<sup>32</sup>. *History of the Combined Operations Organisation*, p.173.

<sup>33</sup>. Landing Ship, Stern-Chute, Landing Ship, Carrier and Landing Ship, Gantry could all transport LCM in large quantities. However, these wartime conversions of merchant ships were all returned to trade. Although the LST(C) could carry LCM on its upper deck it could only unload them in ideal conditions and did not provide the repair facilities of an LSD.

<sup>34</sup>. COS (46) 18 mtg. COS (46) 260.

build this vessel, and on highest priority it might be constructed in two.<sup>35</sup>

Accordingly, the Admiralty included one £690,000 LSD in the 1947/8 New Construction Programme.<sup>36</sup> Although Laycock included one LSD in his 1947 proposals, the Combined Operations organisation was no longer convinced that the LSD was a necessity.<sup>37</sup> With the planned LST(A) able to carry and launch LCA, the main rationale for the LSD was its ability to transport and operate LCM in the assault. The use of ocean going LCT(8) solved the problem of landing tanks and armoured vehicles in the early stages of the assault. LCMs were valuable for use in shallow and confined waters unsuitable for the operation of LCT(8), and for this reason it was recommended that a number be retained. However, a new LCM was not being designed as it was hoped that the replacement for the wartime LCA would be able to carry small vehicles.<sup>38</sup>

As the requirement for LCM lapsed then so did the requirement for their assault carrier, the LSD. The Admiralty cancelled plans to build this ship.<sup>39</sup> Its value as a repair and maintenance vessel was recognised but not considered sufficient to justify its expense. In reality it is unlikely that the LSD would have been built in any case. The stringent economies forced on all three Services at this time meant that only high priority construction projects had any real chance of being completed. There is little reason to believe that plans for an LSD would have fared any better than those for the LSH.

Plans to upgrade the LST fleet met with difficulties. In 1947 the Admiralty reported that design work was under way for the conversion of LST to LST(A).<sup>40</sup> During that year COHQ produced broad staff requirements for a new ship, the LST(4). The LST(4) was to be diesel powered and capable of 14 knots. It was to be able to carry twelve 70 ton tanks on its tank deck and have an upper deck suitable for simple conversion into living accommodation. Maximum

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<sup>35</sup>. COS (46) 173 mtg.

<sup>36</sup>. B616 in ADM 167/129.

<sup>37</sup>. COS (47) 129(o).

<sup>38</sup>. COHQ Policy Brief No.11, 23 August 1948; DEFE 2/1552. **Impartial investigation into the uses of the LCM in the future**, docket CO 660/47; DEFE 2/1551.

<sup>39</sup>. B589 in ADM 167/133.

<sup>40</sup>. COS (47) 157, 6 August 1947, memo by Admiralty; DEFE 5/5.

dimensions were to be consistent with the stated War Office maximum dimensions for all vehicles until 1956. In addition to launching amphibians and AFVs equipped with flotation devices, the ship was to be capable of discharging vehicles into water within their wading depth on the flattest beaches.<sup>41</sup> However, no action was taken. By the early 1950s the Admiralty was still undertaking to design and construct a prototype LST(4) but the project did not receive sufficient attention and in the event this ship never progressed beyond the drawing board.

By 1948 no action had been taken to convert any of the LST to LST(A). Despite having some doubts as to the operational value of LST(A), COCOS Wildman-Lushington recommended that one LST(A) should be converted for initial trials and that at least five (sufficient for battalion lift) should be earmarked for conversion following this. He left the question of whether to convert the 17 agreed in 1946 to a later date. In the absence of LSI, these LST(A) were “*to satisfy peacetime training requirements and for operational needs in the early stages of an emergency*” .<sup>42</sup> By 1949 it was looking increasingly unlikely that the Admiralty would bear the cost of full conversion to LST(A). The original proposal for full-scale conversion of an LST(3) to LST(A) was deferred in May 1949.<sup>43</sup> DCOM at the Admiralty suggested a more limited conversion be accepted, and by September COCOS was being advised that full conversion was unlikely to take place.<sup>44</sup>

COHQ were by no means convinced that the LST(A) was a good idea. In a paper presented within the headquarters in November 1946 it was demonstrated that this vessel was only a poor substitute for LSI(L).<sup>45</sup> Reporting to the DCOM in 1948 COHQ concluded that “*the LST(A) can not be recommended for war, and is a second best for peacetime training*” .<sup>46</sup> The LST was noted as being particularly unsuitable for Commando use in raiding due to its relatively low speed. Contrary to previous claims the use of LST to land infantry was against all known

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<sup>41</sup>. **Broad Characteristics of LST(4)**, 2 May 1947 docket CO 328/47; DEFE 2/1554.

<sup>42</sup>. DEFE 2/1612.

<sup>43</sup>. Director of Naval Construction to Director of Naval Equipment, 25 September 1949; DEFE 2/1612.

<sup>44</sup>. Policy Brief No.17, 8 August 1949; DEFE 2/1612.

<sup>45</sup>. **Conversion of LST(3) to LST(A)**, report by Policy Group, COHQ; DEFE 2/1612.

<sup>46</sup>. DEFE 2/1612.

United States practice. COHQ continued to press for LSI, but if these could not be made available for peacetime training, then they suggested limited conversions of LST to allow them to act as LST(A) for training purposes only. These LST would be able to accommodate troops for up to 72 hours only, under peacetime conditions. Unsuitable for operational use these ships would be much less expensive than LST(A) proper.<sup>47</sup>

A number of studies were conducted to examine the carriage of troops in aircraft carriers. In December 1947 HMS *Triumph* conducted Exercise "*Marine Rumpus*" which included the embarkation of Commandos and vehicles from Malta. It was considered that a small infantry battalion or Commando could be lifted in two light fleet carriers and that a brigade consisting of three battalions and brigade headquarters could be lifted if the carriers did not embark their air groups. The main disadvantage in this arrangement, other than impairing the carrier's role in operating aircraft, was the time taken to embark and disembark troops. Proposals to convert operational carriers by adding a stern ramp and heavy davits for craft and equipment were not given serious consideration. One can only imagine the response of a 1SL asked to expend money and shipyard space converting his precious fleet of aircraft carriers for the benefit of Combined Operations.<sup>48</sup>

In 1950 COHQ investigated the possibility of using redundant *Leviathan* class aircraft carrier hulls as the basis for assault ships. Three such hulls were available and it was anticipated that they could fill the role of LSI. Again, the project received little priority. COCOS Wildman-Lushington was determined that consideration of this project should not be at the expense of the construction and modification of "*bona fide*" amphibious ships and craft.<sup>49</sup> The proposals to use aircraft carriers as landing ships were never likely to receive much serious attention at a time when the available resources in landing ships and craft were seen as adequate, or at least nearly so. Even the *Leviathan* class ships, which were too small to operate modern aircraft, were large ships with deep draught and a heavy manpower requirement. It was not until the mid-1950s, after the

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<sup>47</sup>. Ibid.

<sup>48</sup>. *Transportation Craft*, docket 730/46; DEFE 2/1620.

<sup>49</sup>. Folios 5,6 + 8 docket 707/1/50; DEFE 2/1604.

potentialities of helicopters began to be recognised, that plans to convert carriers for amphibious warfare duties aroused serious interest in Britain.

Conventional warships could be used for the carriage of assaulting infantry. Such ships had the dual advantage of a relatively high speed compared to specialist amphibious ships and an appearance that would not immediately cause an enemy to appreciate that a landing was in the offing. However, unconverted warships were unable to carry the assault craft required for successful landing operations and would experience difficulties accommodating large numbers of troops for anything more than very short periods. Operational experience in World War Two had shown time and again the need for specialist shipping.

As early as 1945 the Admiralty were considering the follow on craft to the LCT(8). It was noted that the LCT(8) was a large and expensive vessel and that in any future war this would cause difficulties in manufacture and manning.<sup>50</sup> COHQ prepared broad staff requirements for an LCT(9) in 1946.<sup>51</sup> Design work was undertaken, although no craft were produced. The agreed staff requirements of July 1949 stated that the LCT(9) was to be capable of embarking four 75 ton tanks or equivalent and of landing them directly onto the beach or launching them in deep water. With a maximum speed of at least 12 knots the craft was to travel 5,000 miles of ocean at 10 knots. The estimated cost of the vessel was £280,000 which was considered too expensive. It was thus suggested that a proportion of the craft would not be equipped to launch amphibious tanks, saving approximately £25,000 per vessel.<sup>52</sup> The Admiralty undertook to complete the design of the LCT(9).<sup>53</sup> In 1956 the Director of Naval Construction reported to CAW that although it was intended to produce detailed plans, actual construction of LCT(9) would not be started until an emergency arose.<sup>54</sup> The craft would therefore not be available until the advanced stages of a future conflict. In October 1956 AWHQ appear to have believed that

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<sup>50</sup>. Folio 15 + 18 docket CO 413/45; DEFE 2/1341.

<sup>51</sup>. CR.907/46; DEFE 2/1552.

<sup>52</sup>. **Agreed Staff Requirements for LCT(9)**, 24 July 1950, folio 8 docket 801/50; DEFE 2/1623.

<sup>53</sup>. COS (51) 602, 22 October 1951, report by CAW; DEFE 5/34.

<sup>54</sup>. Folio 4, docket AW 558/56; DEFE 2/1902.

approval had been given for the construction of a prototype LCT(9), however, as with the LST(4), this craft was never built.<sup>55</sup>

The Royal Navy was fortunate that in the LCT(8) it gained an adequate craft in sufficient numbers for post war purposes. The LCT(8) was superior to its wartime ancestors and had seen no exhausting wartime service. Once the craft had been strengthened to carry Centurion tanks they were deficient only in the ability to launch modern Duplex Drive (DD) amphibious tanks. This shortcoming, although important, was less serious given the fact that only experimental Centurion DD equipment was produced. By the early 1950s some problems of availability were beginning to surface. Three LCT(8) were temporarily converted to LCH and one was converted for use by the Admiralty as an experimental minesweeper.<sup>56</sup> The result was that the margin above the operational requirement of 24 plus two for training was reduced to nil. Landing craft are by no means indestructible and without new construction the LCT(8) fleet was liable to fall below requirements.

The position regarding other amphibious vehicles was little better. During the Second World War the majority of amphibians operated by the British were of American design and build. In order to supplement supplies from the United States, the War Office developed their own vehicles, the Terrapin and the Neptune. Work on the four ton Terrapin was initiated in October 1942. A small number were produced but the design was not successful. Work began on the Terrapin Mk.2 in September 1943 and four prototypes were built but, as effective production in time for operations was impossible, the production order was cancelled. The Neptune was undergoing prototype trials when the War ended. However the design was unsatisfactory, largely because of excessive weight and reliability problems.<sup>57</sup> At the Admiralty work was initiated on an amphibian intended primarily for the build-up. Despite War Office interest in developing new wheeled and tracked amphibians, lack of priority and consequent lack of funding meant that in the event no Army

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<sup>55</sup>. Folio 25, docket AW 558/56; in DEFE 2/1902.

<sup>56</sup>. COS (53) 137, 12 March 1953, memo by the Admiralty; DEFE 5/45.

<sup>57</sup>. Folio 1 docket CO 307/47; DEFE 2/1458. Folio 1 docket 91A/47; DEFE 2/1459. Folio 4 docket CO 170/47; DEFE 2/1354.

amphibians were produced.<sup>58</sup> The Navy developed a prototype amphibian NLVT(X), intended for us in the post-assault build-up. A costly and somewhat inadequate project, the NLVT(X) never went into wider production.<sup>59</sup>

With no British amphibians being constructed, in 1951 CAW called for 12 Landing Vehicle Tracked Armoured (LVT(A)) and a number of Landing Vehicle Tracked (LVT) to be acquired from the United States in order to keep abreast of development and to establish a cadre which could be expanded in war.<sup>60</sup> The COS agreed that the possibility of acquiring LVT(A) and LVT from the United States should be investigated.<sup>61</sup> The provision of amphibians was unsatisfactory. Britain relied on stocks of American built wartime LVTs and DUKWs (amphibious trucks). The VCIGS, Lieutenant-General Brownjohn, admitted that the position regarding these amphibians was "*precarious*". There was no production and no research or development devoted to amphibians, nor was it possible for the War Office to divert any towards them. In June 1952 Britain had only 37 LVT and 12 DUKWs in the United Kingdom in a fit condition. Owing to lack of spares these were something of a wasting asset, Table Two.<sup>62</sup>

**Table Two: Situation regarding amphibians, 4 June 1952**

<b>LVTs</b>	Fit - 36 with units. - 1 in depot
<b>DUKWs</b>	Fit - 12 with units - 200 in depot and earmarked for repair.

Under a repair programme it was hoped to increase the availability of LVT by 25, including 10 LVT(A). The repair of DUKWs awaited the arrival of spares under the American Mutual Defence Aid programme. However, all existing British amphibians were last war types and CAW considered them unfit for operational service, even if spares could be made available. He had little hope that the Admiralty

<sup>58</sup>. **Amphibians - Policy Summary**, docket CO 251/47; DEFE 2/1354. Folio 4 docket CO 91J/47; DEFE 2/1461. Folio 14+38; DEFE 2/1463.

<sup>59</sup>. COS (49) 312, 21 September 1949, memo by Admiralty; DEFE 5/16. COS (49) 143 mtg, 28 September 1949; DEFE 4/25. Docket CO 91/E/49; DEFE 2/1462. Docket 91/47; DEFE 2/1459.

<sup>60</sup>. COS (51) 601.

<sup>61</sup>. COS (51) 173 mtg, 29 October 1951; DEFE 4/48.

<sup>62</sup>. COS (52) 69 mtg, 19 May 1952; DEFE 4/54. COS (52) 291, 4 June 1954, memo by War Office; DEFE 5/39.



would be able to loan LVT and LVT(A) from the United States without according the project a reasonably high priority.<sup>63</sup> In the event nothing came of this.<sup>64</sup>

In March 1951 the COS endorsed a report by CAW identifying the ships and craft required to be maintained in peacetime.<sup>65</sup> The report located a number of areas for concern. It was noted that there was a deficiency of Landing Craft, Personnel (LCP) and Landing Craft, Navigation (LCN) and that this would have to be compensated for by employing extra LCA of which there was a surplus. The only LCH was non-operational and plans for the temporary conversion of three LCT(8) to operate in this role would reduce the existing margin of LCT(8) over requirements. It was pointed out that all existing LST and LCT required modification to enable them to carry the latest, heaviest army tanks, as existing decks were not strong enough. Work had already begun to remedy this situation. The Admiralty were invited to approach the Shipping Resources Committee to earmark the following vessels for conversion on mobilisation: six LSI(M), three LSI(L), and one LSH. The requirement for LSI(L) arose because the proposals to convert LST(3) to LST(A) for operational purposes were not being pursued. A more limited conversion suitable for training purposes, and available for operations if required, was to go ahead. In addition, the Admiralty was to investigate the possibility of acquiring three Landing Ship Medium (Rocket) (LSM(R)) from the United States on mobilisation for the provision of close support.<sup>66</sup>

In September 1945 the Royal Navy had 39 Landing Craft Tank (Rocket) (LCT(R)), 31 Landing Craft Gun (Large) (LCG(L)), 48 LCG(Medium), and five Landing Craft Support (Large) (LCS(L)) to provide close fire support in the amphibious assault.<sup>67</sup> The requirement for the provision of support fire during the critical period from the time just before the first wave of assault infantry set foot ashore until they had cleared the beach of opposition and established their own support weapons ashore remained important to post war planners. The JPS recommended that 9 LCG(M) and 6 LCT(R) be retained for support of the brigade group assault. The

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<sup>63</sup>. COS (52) 649, 29 November 1952, report by CAW; DEFE 5/43.

<sup>64</sup>. Grove, *Vanguard to Trident*, p.182.

<sup>65</sup>. COS (51) 146. See chapter three, page 86.

<sup>66</sup>. Ibid..

<sup>67</sup>. ADM 210/17.

LCG(L) was dropped as the fire it provided was similar to that of a destroyer and as such it was not worth the provision of a special craft.<sup>68</sup> Both the LCT(R) and the LCG(M) were wartime improvisations of LCT hulls. As such, they had seen extensive operational service. Investigation showed that these craft were not suitable to operate with the mobile ocean going post war Assault Training Force and the Admiralty and COHQ agreed to their disposal.<sup>69</sup>

An inter-Service meeting held in COHQ on 26 August 1947 set out the requirement for close support in the assault. It was agreed that:

Fire support in an assault should be similar to that available in a land battle. This means that it should be possible to engage immediately opportunity targets within 100 yards of the assaulting troops, from the time they are 500 yards from the land, to the time when their normal support weapons are deployed and able to give close support; at present this may be when the leading elements have advance approximately 1000 yards from the sea.<sup>70</sup>

For safety reasons, existing seaborne support weapons such as warships, rocket support craft and self propelled artillery firing from LCT could not bring down fire less than 500 yards from the assaulting infantry. Consequently, with the exception of DD tanks and of aircraft, there was no means available of giving close support to the leading infantry as they crossed the final 500 yards of water and the first 1,000 yards of land. The meeting identified a paramount need for a standard army weapon to be mounted in a landing craft or amphibian so as to fire on the run-in and to be landed as early as possible in the assault.<sup>71</sup>

Trials were conducted in 1948 with an LCA fitted to operate an Army 75mm howitzer. Although it was possible to fire the howitzer from the LCA, only the gun and its trailer could be carried. In the absence of any transport for the howitzer, great difficulties were experienced in disembarking the weapon and deploying it on the beach. Trials showed that only in ideal conditions was the landing of the weapon a practical operation. Neither the School of Artillery nor the School of

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<sup>68</sup>. JP (45) 259.

<sup>69</sup>. **LCT(R) for the Post-war Fleet**, DEFE 2/1552. COS (47) 129(o).

<sup>70</sup>. Folio 15 docket CO 549/47; DEFE 2/1558.

<sup>71</sup>. Ibid.

Combined Operations considered that special support batteries of 75mm howitzers fitted in LCA was a particularly useful idea. Only in small scale operations, where DD tanks and self propelled artillery could not be landed would such a battery be justified. In situations where the fire support provided by DD tanks and air cover had proven inadequate it was not considered that one special support battery would turn the tide.<sup>72</sup>

In view of the decision to scrap obsolete wartime support craft and the reluctance of the Admiralty to provide rocket ships, the School of Combined Operations considered that the provision of bombardment charges for Royal Navy destroyers was important. The Director of Gunnery and Anti-Aircraft Warfare at the Admiralty disagreed. He pointed out that the essential function of the destroyer was to support and screen the fleet units and their equipment was designed for this purpose. The supply and storage of specialist ammunition for the support of amphibious operations was considered logistically undesirable, as was the fitting of the special fire control gear needed to make such charges fully effective.<sup>73</sup>

In 1943 the Admiralty had issued staff requirements for a Landing Craft Support (Rocket) (LCS(R)) to provide close support in the assault by means of the mass use of high explosive, smoke and incendiary rockets.<sup>74</sup> After the War renewed studies were conducted into the provision of a Naval Rocket Ship. In November 1946 staff requirements were formulated for a Landing Ship Support (Rocket) (LSS(R)). Preliminary work showed that the full requirements for a very accurate weapon could not be met with existing technology. Any compromise solution adopted before advances in rocket technology made possible the necessary improvements would not have been greatly superior to the existing United States LSM(R) and so as an interim measure it was suggested that this ship be procured.<sup>75</sup>

The LSM(R) was an American wartime conversion of the Landing Ship, Medium. By decking over the hold, sealing the bow doors and fitting a five inch gun and 20 continuous loading five inch rocket

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<sup>72</sup>. DEFE 2/1656 + DEFE 2/1559.

<sup>73</sup>. Folio 1 + 3 docket 1100/48; DEFE 2/1656.

<sup>74</sup>. **Proposed Improved Rocket Support Ship LSS(R)**, paper by COHQ; DEFE 2/1297.

<sup>75</sup>. Ibid. CO 604/47; in DEFE 2/1551.

launchers the LSM(R) could fire 1,040 rockets in the first minute of action. This represented the equivalent fire of four or five destroyers, each armed with four 4 inch guns. It took forty-five minutes to reload and the ship carried enough rockets for three full salvos. The ships also carried four 4.2 inch mortars, two 40mm and four 20mm twin anti-aircraft guns. With a crew of 6 officers and 137 men it could steam 3,000 miles at 12 knots. The LSM(R) saw action in the Pacific theatre, providing fire support for the Okinawa landings. Fifty-two were built or under construction by the end of the War.<sup>76</sup>

In 1948 COHQ concluded that six LSM(R) were required to provide support for the brigade group assault, on a basis of two per battalion front. Consequently the Admiralty was requested to make six LSM(R) available at short notice in an emergency and to provide the training necessary to make effective use of this equipment. The requirement was to lapse once a British rocket ship or craft was available. The Admiralty was reluctant to accept this additional responsibility. The USN had eight LSM(R) in commission with another 36 in reserve. The ships in reserve were described by CCOR as being in only "*fair*" condition and the ammunition situation was poor. The Admiralty was aware of the value of these ships but in view of the low priority they accorded the brigade group assault they were unwilling to accept them as a definite requirement.<sup>77</sup>

In 1950 COHQ scaled down their requests, first to three LSM(R) to be provided on mobilisation for use in the opposed assault, and then in 1951 to one LSM(R) in order that Britain might keep abreast of developments.<sup>78</sup> In 1951 the COS agreed that the possibility of acquiring one LSM(R) from the United States should be investigated.<sup>79</sup> The Admiralty remained reluctant due to manning difficulties and the issue remained unresolved. Rear Admiral Elkins, representing the VCNS, told the COS Committee that the manpower to bring an LSM(R) over from America could only be provided by paying off a frigate. He considered this unacceptable.<sup>80</sup> In May 1953

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<sup>76</sup>. Ladd, *Assault from the Sea*, p.196. *Allied Landing Craft of World War Two*.

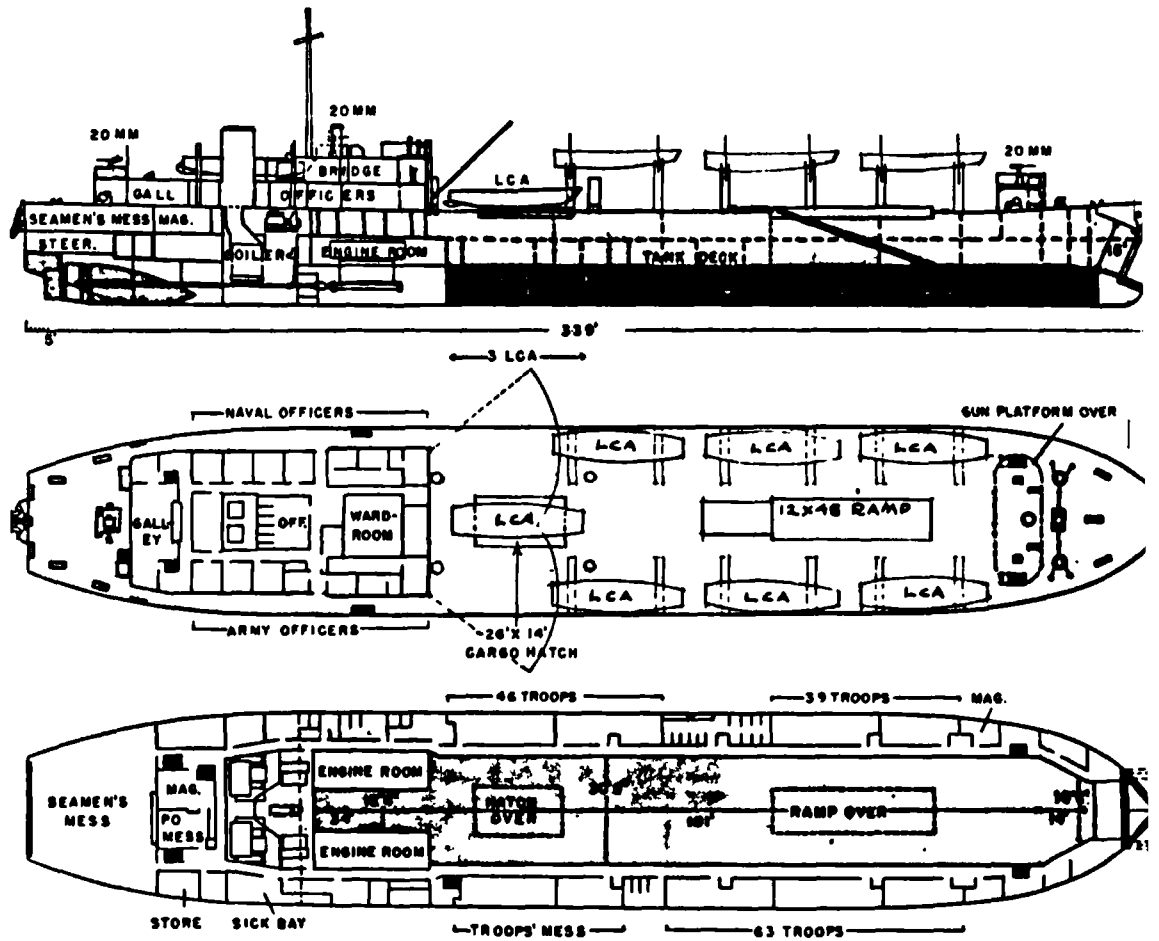
<sup>77</sup>. Dockets CO 549/47 and CO 277A/49; DEFE 2/1551.

<sup>78</sup>. COS (50) 295, 9 August 1950, report by COCOS; DEFE 5/23. COS (51) 601.

<sup>79</sup>. COS (51) 173 mtg.

<sup>80</sup>. COS (51) 463, 9 August 1951, memo by Admiralty; DEFE 5/32. COS (52) 154 mtg, 10 November 1952; DEFE 4/57.

**Figure Six. Landing Ship, Tank (Assault).**



the Admiralty reported that there was no LSM(R) in reserve in the United States in sufficiently good condition to go straight into reserve in Britain. The Chiefs accepted that no further action should be taken in the matter of acquiring an LSM(R) until the outbreak of war. It was noted that training might occasionally be possible with USN LSM(R) allocated to the US Atlantic Fleet.<sup>81</sup>

The report of March 1951 outlined a requirement for three LST(3) to be converted to carry six LCA at davits as makeshift LST(A).<sup>82</sup> By March the following year no action had been taken but the COS agreed that the requirement was urgent and should be carried out as soon as possible.<sup>83</sup> In August the Admiralty reported that, although one LST(3) (HMS *Reggio*) had been converted by adding davits for six LCA, all future action was being suspended until trials with the new design LCA could be completed.<sup>84</sup> Work was eventually started on two further LST, HMS *Striker* and HMS *Anzio*, and all three LST(A) were ready in time for the Suez crisis.

The LST(A) provided accommodation for 20 officers and 40 troops in cabins and enclosed messes. This could be increased by 120 men sleeping on stretchers in the tank deck at the expense of some vehicle lift. With no vehicles in the tank deck 260 men could be accommodated there. Given good climatic conditions, an extra six officers and 50 troops could be accommodated on the upper deck, or six officers and 150 men for a trip of less than 24 hours. Thus, the total maximum personnel lift of the LST(A) was 20 officers and 450 men. Twelve Centurion tanks or 27 three ton lorries could be carried in the tank deck. The upper deck had room for four 3 ton lorries and 22 Champs (Jeeps), see figure six.<sup>85</sup>

For raiding operations, LSI(M) had proven the most useful ship during the War. These ships, of the cross-channel steamer type, combined suitable size with speed and manoeuvrability, making them ideal for assaults where speed and surprise were at a premium. With the allocation of a Commando Brigade for raiding in the

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<sup>81</sup>. COS (53) 206, 2 May 1953, memo by Admiralty; DEFE 5/46. COS (53) 60 mtg, 11 May 1953; DEFE 4/62.

<sup>82</sup>. COS (51) 146.

<sup>83</sup>. COS (52) 45 mtg, 31 March 1952; DEFE 4/53.

<sup>84</sup>. COS (52) 449, 19 August 1952, note by Admiralty; DEFE 5/41.

<sup>85</sup>. Amphibious Warfare Handbook No.4A, *The Battalion with Supporting Arms in the Amphibious Assault*, 1956; DEFE 2/1760.

Mediterranean on the outbreak of war and plans for a similar brigade to be formed in the United Kingdom some provision had to be made for their assault shipping. CAW recommended that three LSI(M) be made available in each theatre at the same time that the Commandos would be available for operations. This meant that three LSI(M) (plus their complement of 8 LCP, 15 LCA and 1 LCN) were required in the Mediterranean on the outbreak of war.<sup>86</sup>

Although this target was approved by the COS, the provision of LSI(M) gave some cause for concern. In October 1951 CAW reported that unless foreign flagged ships could be used then no more than three or four ships would be available within three months.<sup>87</sup> AWHQ pressed for the stockpiling of the necessary davits required for three cross channel steamers to be converted to LSI(M) on the outbreak of war. The Admiralty reported that full conversion to LSI(M) would require six months, and only by stockpiling the necessary equipment could a limited conversion be effected in two months.<sup>88</sup> In October 1953 CAW was still pressing for three sets of LCA davits (24 pairs) to be provided in order that the three ships earmarked for limited conversion to LSI(M) could be ready within two months of mobilisation.<sup>89</sup> In 1955 the Shipping Resources Committee informed the COS that insufficient passenger ships existed to meet the requirements of both essential trooping and the conversion of ships to LSI(M). It was therefore agreed to cancel the provisional earmarking of ships for conversion to LSI(M).<sup>90</sup>

The requirement for the LSD was revived in the early 1950s. In 1952 staff requirements were issued for both a new LCM (LCM(8)) and a Landing Ship, Tank (Dock) (LST(D)). The function of the LST(D) was to transport and discharge in the assault 10 LCM(8) preloaded with 50 ton tanks, three American Landing Ship Utility (LSU), and as many stores as possible. The ship was to have a maximum speed of 17 knots and an endurance of 7,400 miles at 15 knots, fully loaded. In addition to crew, accommodation was required for 25 officers and

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<sup>86</sup>. COS (50) 295.

<sup>87</sup>. COS (51) 601.

<sup>88</sup>. COS (52) 649, 29 November 1952, report by CAW; DEFE 5/43.

<sup>89</sup>. COS (53) 538, 30 October 1953, report by CAW; DEFE 5/49.

<sup>90</sup>. COS (55) 24 mtg, 6 April 1955; in DEFE 4/76.

250 other ranks.<sup>91</sup> The change in attitudes had been prompted by the decision that the Army might want to land individual tanks in LCM during the assault. The landing of first priority tanks in LCT had the disadvantage that it precluded dispersal, with four or five tanks in each craft. This made the loss of one craft at sea much more serious and raised the prospect of the lead tank in an LCT being immobilised on the bow ramp and blocking in the remaining vehicles. Also, the size of LCT(8) meant that they could not land in as shallow water as an LCM. Previous policy had been for individual tanks to land using the DD flotation system. The lack of DD equipment and the inability to launch DD equipped tanks from the existing ships and craft had led to this capability being allowed to lapse.<sup>92</sup>

In his progress report of April 1952 CAW Thomas requested that the Admiralty proceed with the construction of a prototype LSD/LST(D) and LCM in 1953. According to the accelerated Fraser Plan for naval rearmament the LST(D) was not due to be laid down until 1956. By 1952 the Admiralty had given only preliminary consideration to the project.<sup>93</sup> Thomas was anxious that construction of this vessel should go ahead and wrote to the Admiralty promoting the LSD as a valuable member of the fleet train due to its repair and maintenance facilities.<sup>94</sup> Nevertheless, the LST(D)/LSD fell victim to the 1953-1955 defence cuts. In August 1952 the Admiralty reported that the project was in abeyance.<sup>95</sup> In October 1953 CAW was still unsuccessfully pressing for construction of the LSD.<sup>96</sup> It was recognised that without the LSD, tanks could only be landed in the assault given favourable beach and weather conditions. A contract to design an LCM(8) along the lines of the 1952 staff requirements had been issued to Vosper at Gosport. This design was completed in 1955. However, the cancellation of the LSD meant that there was no suitable ship available to carry the craft and the project was shelved.<sup>97</sup>

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<sup>91</sup> **Draft Staff Requirements for LST(D)**, 12 March 1952, folio 3 docket CO 707/42/52; DEFE 2/1871.

<sup>92</sup> Amphibious Warfare Ships and Craft sub-Committee, meeting held on 17 and 24 April 1952, folios 8 + 11 docket AW 707/51/52; DEFE 2/1876.

<sup>93</sup> Letter from DNC to AWHQ dated 29 May 1952, folio 9 docket CO 707/42/52; DEFE 2/1871. COS (52) 234, 30 April 1952, report by CAW; DEFE 5/39. COS (52) 69 mtg, 19 May 1952; DEFE 4/54.

<sup>94</sup> Letter of 19 June 1952, folio 14 docket AW(o) 1873/53/54; DEFE 2/1851.

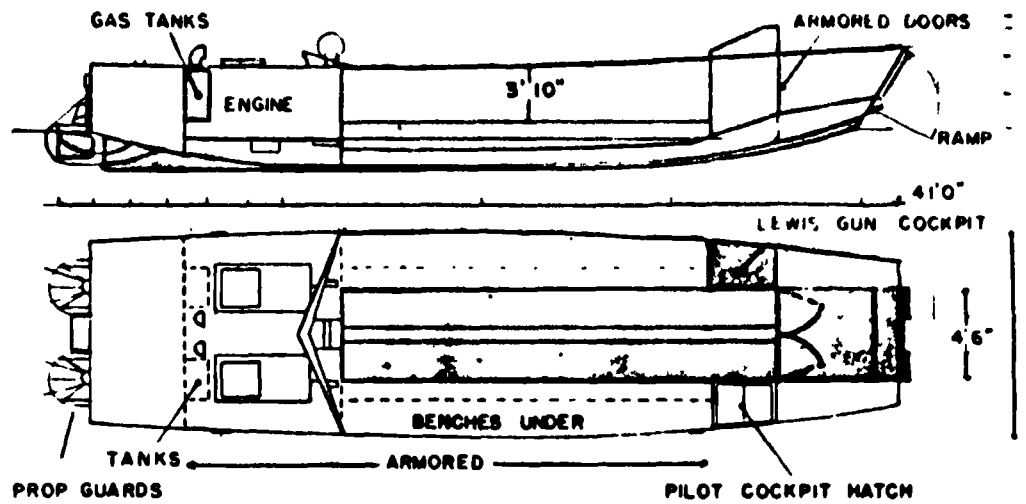
<sup>95</sup> COS (52) 448, 19 August 1952, note by Admiralty; DEFE 5/41.

<sup>96</sup> COS (53) 538, 30 October 1953, report by CAW; DEFE 5/49.

<sup>97</sup> Folio 25, docket AW 558/56; DEFE 2/1902. DEFE 2/1912, DEFE 2/1913, DEFE 2/1914.



**Figure Seven. Landing Craft, Assault.**



Minor landing craft had been built by the thousand during the War. Despite the heavy losses associated with their operational use, Britain finished the War with a large surplus of craft. In 1946 Britain had 1,013 spare LCA after catering for national requirements.<sup>98</sup> In these circumstances it was inconceivable that there would be major building programmes in the 1940s. However, deficiencies existed in some areas. Landing Craft, Control were all Lend-Lease, and as such were returned to the United States. Out of 200 available LCP(L) all but 30 were also Lend-Lease equipment.<sup>99</sup> In 1951 CAW reported that despite a surplus of LCA there was a deficiency of seven LCN and 44 LCP. The ten available LCP were suitable only for training and, due to lack of spares, they were to be regarded as a wasting asset. Until new LCN and LCP could be constructed, surplus LCA would be required as a stopgap. However, even in this respect the situation was unsatisfactory as many of the LCA in reserve were in a condition beyond economical repair, see figure seven.<sup>100</sup>

Moves towards the replacement of minor landing craft had been limited. The New Construction Programme of 1947-8 had included only one LCP.<sup>101</sup> In 1952 CAW reported that the Admiralty had undertaken designs for a new LCA and that a new fast Landing Craft Raiding (LCR) was being produced. He also noted that the wartime minor craft were rapidly becoming unserviceable and invited the Admiralty to make provision for their replacement in the next financial year. In response the Admiralty pointed out that approval had already been given for the construction of four new pattern LCA and eight LCR.<sup>102</sup> By October 1953 the situation was still unsatisfactory. Although financial approval had been given in the 1952-54 Estimates for eight LCA and 12 LCP, no construction had begun. Despite the fact that four LCP(M) were being built and a prototype LCP(S) had been constructed there was still a backlog of four LCP(M) and 7 LCP(S) on the total approved for 1952-54. Only preliminary consideration had been given to the approved prototype LCN.<sup>103</sup> The gradual replacement of the old craft continued, within

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<sup>98</sup>. JP (45) 259.

<sup>99</sup>. Ibid.

<sup>100</sup>. COS (51) 146.

<sup>101</sup>. B589 in ADM 167/133.

<sup>102</sup>. COS (52) 234. COS (52) 69 mtg, 19 May 1952; DEFE 4/54. The new style LCA was larger than the wartime original, being designed to carry a jeep. CD 829, National Maritime Museum, Woolwich..

<sup>103</sup>. COS (53) 538.

the limits imposed by financial restrictions. The first LCA was due to complete in February 1955 and contracts had been placed for eight 40 foot LCR. Eight new type 27 foot LCP(M) had entered service by the end of 1954 and a contract for four 20 foot LCP(S) had been placed. By 1956 the first eight LCA(2) were in service and further construction was underway. The four LCP(S) were also in service and ten more were completed by 1957. No further production of these craft was contemplated as they were to be replaced by Gemini inflatables. Two of the eight LCR were completed as specialist LCN.<sup>104</sup>

Clearly, without new construction amphibious capabilities were bound to deteriorate. That the Admiralty were firmly opposed to expending unnecessary manpower and finance on amphibious warfare, has been shown in chapters two and three. The Admiralty were concerned mainly with preserving the traditional tools of seapower, while the main pre-occupation of post-war shipyards was the reconstruction of the merchant fleet. Naval programmes were hampered by a lack of finance and a shortage of technical design staff. Under these circumstances, little work on new construction could be expected. No naval building programme was drawn up for 1946.<sup>105</sup> The 1947 programme did include an LSD and an LCP. The LSD was cancelled but projects which the Admiralty accorded a relatively high priority also suffered. Cutbacks caused the suspension of all three *Tiger* class cruisers in 1946 and the aircraft carrier *Ark Royal*, which was laid down in 1943, did not enter service until 1955.<sup>106</sup> The project for the LST(D) fell victim to defence cuts in the 1950s, but then so did Admiralty plans for a new fleet carrier.<sup>107</sup> The Admiralty, and indeed all the Services, were forced to concentrate scarce expenditure as far as possible on high priority projects. An inter-Service responsibility regarded as a low priority by the Admiralty, amphibious warfare suffered as a result. Walter Monckton, Minister of Defence between December 1955 and October 1956, recalled that in order to ensure defence cuts and to safeguard spending on the nuclear deterrent, spending on conventional forces had to be cut to the bone. This involved taking calculated risks, a good example of which

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<sup>104</sup>. COS (54) 372, 2 December 1954, report by CAW; DEFE 5/55. Also DEFE 2/1912-15.

<sup>105</sup>. Grove, *Vanguard to Trident*, p.21-3.

<sup>106</sup>. *Conway's all the World's Fighting Ships*, (London: Conway Maritime Press, 1983).

<sup>107</sup>. Grove, *Vanguard to Trident*, p.99

was his decision not to call for an increase in landing craft despite the shortage of such equipment. Monckton accorded amphibious warfare a very low priority, believing that Britain could rely on American assistance in future operations.<sup>108</sup>

By 1955, apart from a number of newly built minor craft, Britain's amphibious fleet was entirely made up of old war built vessels. It was fortunate that the LST(3), LCT(8) and LCM(7) were practically brand new in 1945 and were thus able to operate effectively until they were phased out of service in the 1960s. Earlier types had less satisfactory designs and, having seen extensive wartime use, would not have stood up to the rigours of post-war service. One unfortunate side effect of the existence of these relatively modern vessels was that their availability reduced the urgency of calls for new construction and provided an incentive for the Services to remain wedded to the old style amphibious techniques for which they had been designed. Had these vessels not existed new construction may have been given a higher priority. New amphibious vessels could have been built, conforming to peacetime standards of construction and designed to incorporate advances in amphibious techniques. However, it is by no means certain that any such construction would have been undertaken. In view of the tight financial restrictions of the late 1940s it is more likely that old, unsuitable, worn out war veterans would have been pressed into service with new construction delayed as long as possible or not undertaken at all. The failure to maintain and update the amphibious fleet is a clear indication of the lack of priority it was accorded.

The amphibious fleet in 1955 may have been of wartime vintage but it was by no means simply a scaled down version of the great amphibious armada that existed in 1945. In 1955 there was not the range of equipment and capabilities that existed ten years earlier. Unlike its wartime predecessor the amphibious fleet of the 1950s was not a well rounded force. There was no LSH suitable for divisional or even independent brigade group assaults. There were no LSD to carry LCM. There was no specialist support craft or any ability to land DD tanks. There were no LSI for the carriage of infantry or LSI(M) for raiding. The inability to launch DD tanks or to carry

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<sup>108</sup>. Lord Birkenhead, **Walter Monckton. the Life of Viscount Monckton of Brenchley**, (London: Weienfeld and Nicolson, 1969) p.306.

LCM to the assault area led to the acceptance of an outmoded technique, that of landing armour in LCT during the assault. Despite strengthening the decks of LCT and LSTs the heaviest army equipment (i.e. Royal Engineer armoured vehicle) could not be landed in the assault. What ships, craft and amphibious vehicles that did exist were old, slow and prone to obsolescence. It was with this amphibious force that Britain was to undertake the assault on Port Said in November 1956.

## **CHAPTER FIVE**

### **OPERATION MUSKETEER**

On 26 July 1956 President Gamel Abdel Nasser of Egypt announced the nationalisation of the Suez Canal in retaliation for the withdrawal of promised Western aid to build the Aswan High Dam. As he spoke the offices of the Anglo-French Suez Canal Company were seized by Egyptian troops. The political background to this action and the diplomatic initiatives that followed it are beyond the scope of this study. Both the British and French governments strongly opposed Nasser's action and military intervention to reverse it was contemplated from the first day of the crisis that followed. Over three months after Nasser's declaration Operation *Musketeer* was launched; an Anglo-French military operation designed to take physical control of the Suez Canal, culminating in an amphibious assault on Port Said on 6 November. This chapter will look at the preparation for, and the actual conduct of, the amphibious operations and assess the extent to which the previous decade of neglect affected the final outcome.

On the day of Nasser's announcement Eden ordered the COS to prepare contingency plans for intervention in Egypt. This move was officially authorised by the Cabinet on 27 July. That same day the Cabinet set up a special Egypt Committee, consisting of the Prime Minister, the Lord President, the Chancellor of the Exchequer, the Foreign Secretary, the Commonwealth Secretary and the Minister of Defence. This committee was responsible for formulating policy regarding the Suez crisis. The COS were to attend as necessary.<sup>1</sup> On 29 July the French Prime Minister, Guy Mollet, flew to London with his Foreign Minister, Christian Pineau, and a team of military advisers to discuss possible joint military action. On 30 July Amiral Nomy, Chief of the French Naval Staff, met the Minister of Defence, Walter Monckton, and 1SL Lord Mountbatten, offering them the full support of the French armed forces to smash the Egyptian President.

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1. EC (56) 1, 28 July 1956; CAB 134/1217.

That same day Eden announced to Parliament that Britain and France were taking “*precautionary military measures*”.<sup>2</sup>

What was required was rapid and effective military intervention to restore the Canal to international control before opposition to military action had time to crystallise. Unfortunately, the armed forces were in no position to provide an effective rapid response. On 26 July the Royal Navy had only one aircraft carrier immediately available, HMS *Eagle*. The light fleet carrier HMS *Bulwark*, engaged in flying trials and training with a reduced complement, was available at short notice in home waters, but did not arrive at Malta until 25 August.<sup>3</sup> Britain had nine other aircraft carriers that could have conducted operations against Egypt but of these, three were undergoing refit or modernisation, two were in reserve awaiting an uncertain future and four were employed in training and trials duties.<sup>4</sup>

The British amphibious capability in the Mediterranean was provided by the AW Squadron. This consisted of the LST(A)s HMS *Striker* and HMS *Reggio* with the LCTs *Bastion* and *Redoubt*, the LSH *Meon* and a motor launch (ML 2583) acting as navigational leader. Sufficient to lift only one Commando, the Squadron should have been capable of lifting the full Commando Brigade at fourteen days notice. However, the ships in reserve at Malta were old and in poor repair and required time to be brought to a level of operational efficiency.<sup>5</sup> The Parachute Brigade and two Commandos (40 and 42) were stationed in Cyprus but both the red and green berets were engaged in internal security duties and desperately needed refresher training in their specialist roles.

Mountbatten was later to claim that on 26 July he told Eden that the Fleet could sail from Malta within a few hours, pick up the Commandos at Cyprus who could then occupy Port Said within three of four days. In 1973 he wrote to Michael Howard:

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2. Roy Fullick and Geoffrey Powell, *Suez: The Double War*, (London: Hamish Hamilton, 1979) p.14-15. Keith Kyle, *Suez*, (London: Weidenfeld and Nicolson, 1992) p.145. A.J. Barker, *Suez: The Seven Day War*, (London: Faber and Faber, 1964) p.21.

3. Norman Polmar, *Aircraft Carriers: A Graphic History of Carrier Aviation and its Influence on World Events*, (London: MacDonald, 1966) p.576. Grove, *Vanguard to Trident*, p.186.

4. Polmar, *Aircraft Carriers*, p.576.

5. Vice Admiral M.Richmond, *Naval Report on Operation Musketeer*; in ADM 116/6209.

The Royal Marines.....could then seize Port Said and the first twenty-five miles of the Causeway along the Canal. All this they would hold very easily without a shot being fired, with great political impact.<sup>6</sup>

Mountbatten had a somewhat flexible relationship with the truth. The records indicate that in fact he was against any such use of the Marines as they would have had great difficulty maintaining their position ashore. The CIGS, Field Marshal Sir Gerald Templer, strongly opposed putting ashore a lightly armed force that might have to face enemy armour. With hindsight it is easy to assert that what was required was a swift *coup de main* which would have rapidly restored control of the canal to Britain and France. The reality is that due to the failure over the last decade to create a mobile, flexible sea based striking force Britain did not possess the forces required to carry out such an operation successfully. At the Cabinet meeting of 27 July the COS argued that the equivalent of three divisions would be required to overcome the Egyptians and that preparations to mount any operation would take several weeks.<sup>7</sup>

Based in Cyprus on anti-terrorist duties, the Commandos had not set foot in a landing craft for eleven months. The brigade had no anti-tank guns and had not conducted training with tanks, LVTs, naval aircraft or gunfire support ships for over a year. 42 Commando had been absent from the brigade for almost two years and was still at cadre strength in the United Kingdom, operating in a training role. The brigade was separated from the AW Squadron which was based at Malta. The 16 Parachute Brigade was no better prepared. Since January 1956 the 1st and 3rd battalions had been stationed in Cyprus. These two battalions had not conducted any parachute exercises for nine months. The 2nd battalion did not arrive in Cyprus until June and it was August before the brigade headquarters and associated support units arrived. There were not enough transport aircraft to accommodate the Parachute Brigade in one lift and the aircraft that were available were ill suited to parachute operations. Despite being in the “*Strategic Reserve*” the 3rd Infantry Division based in the United Kingdom was under strength and had had no opportunity to

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<sup>6</sup>. Ziegler, **Mountbatten**, p.537.

<sup>7</sup>. CM (56) 54th Conclusions, 27 July 1956; CAB 128/30(pt2). Ziegler, **Mountbatten**, p.538. Kyle, **Suez**, p.136. Robert Rhodes James, **Anthony Eden**, (London: Weidenfeld and Nicolson, 1986) p.458.



train with its armour.<sup>8</sup> The 10th Armoured Division was available in Libya but was in reality at little more than brigade strength and its use was in doubt from the outset. As early as 9 August the force commanders ruled out the use of this unit across the Libyan border, largely due to logistic and political difficulties.<sup>9</sup>

Much work was needed before the armed forces could be ready for action. 40 and 45 Commando were moved from Cyprus to Malta, where they were joined by 42 Commando on 16 August. The brigade conducted intensive military and amphibious training and all drivers received instruction in waterproofing and wading. During September the brigade was joined by Air Control Teams, one to each Commando, by teams of observers from 166 Amphibious Observation Battery, and by battalion anti-tank platoons from 3 Infantry Brigade.<sup>10</sup> The brigade could not be considered ready for a serious amphibious operation before September. Brigadier Madoc, commanding officer of 3 Commando during *Musketeer*, was in no doubt that the extended training period was vital for efficiency.<sup>11</sup> The 1st and 3rd Parachute battalions were returned to the Parachute Training School at Abingdon to conduct refresher training with the pilots of their transports. The 3rd Infantry Division drew its mobilisation stores and was brought up to strength.<sup>12</sup>

The situation regarding ships and craft was no better. Of the 19 ships and craft that comprised the AW Squadron for *Musketeer*, 12 had to be brought forward from reserve. The LST(3)s HMS *Suvla*, *Salerno*, *Puncher* and *Ravager* were brought forward from reserve in the Clyde as were the LST(3) *Lofoten* and the LST(A) *Anzio* at Malta. Six LCT(8) were brought out from reserve: *Parapet*, *Counterguard*, *Sallyport* and *Buttress* in the United Kingdom and *Citadel* and *Portcullis* at Malta. A total of 20 LCA(1) were brought forward in Britain for use by the LSTs from the Clyde. It was planned to fit these ships with three sets of davits each and thus rapidly convert them

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8. General H.C.Stockwell, **Report by Commander 2 (Br) Corps on Operation Musketeer**; WO 288/77. Brigadier R.W.Madoc, **3 Commando Brigade Royal Marines - Operation Musketeer Report**; ADM 202/455.

9. WO 288/77.

10. ADM 202/455, p.6-10. Lt-Colonel Gordon West, "Operation Musketeer" in **Marine Corps Gazette**, July 1957.

11. ADM 202/455 p.6-10.

12. Barker, **Suez**, chapter 2.

to LST(A). Unfortunately, there was not enough time to carry this out and the ships sailed for the Mediterranean without full sets of davits. 17 LCA were brought forward at Malta. The LCT *Sallyport* was converted at Devonport to act as an LCH by embarking special headquarters vehicles. HMS *Rampart*, the one LCT already in commission in the United Kingdom, was used to train commanding officers designate.<sup>13</sup>

The LCT(8) had been kept in Operational Reserve and were available at relatively short notice. Ordered into commission on 31 July, the four LCT in Britain sailed from Devonport on 20 August, arriving at Malta eleven days later. The LST were all in Supplementary Reserve which placed them at 28 days notice. Ordered forward on 2 and 3 August, all the LSTs from the Clyde had sailed from Devonport for Malta within a month. Although these ships were made available for action with commendable speed, they were all overdue for refit and were not in any state to undertake operations. The requirement to train that portion of the squadron brought out of reserve conflicted somewhat with the need to make them fit for operations. Not until the end of September were these vessels in an acceptable state of material and training. Scarcity of waterproofing material contributed to the difficulties. It was only possible for one Centurion to be disembarked over a beach during the training period. The LCT *Citadel* had to be withdrawn from service when her bow ramp was torn off during preliminary loading at Malta. The full lift embarked by the AW Squadron is given at Table One.<sup>14</sup>

**Table One: Amphibious Warfare Squadron for *Musketeer***

<b>Ships and Craft</b>	<b>Total lift embarked</b>
1 LSH(S)	178 officers
3 LST(A)	2,305 men
5 LST(3)	51 tanks
9 LCT(8)	16 LVTs
1 LCN	10 17 pounder anti-tank guns
Minor assault craft	19 scout cars
	479 other vehicles

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<sup>13</sup>. ADM 116/6209.

<sup>14</sup>. Ibid.

The Commandos and assault ships conducted individual and ship training throughout September and October. Two major exercises, SEPTEX 1 and SEPTEX 2, were carried out in September. SEPTEX 1 was a two day exercise culminating in an assault landing. SEPTEX 2 was conducted primarily so that air and seaborne support measures could be tested by the Forward Observation Parties.<sup>15</sup>

The two headquarters ships used for *Musketeer* were inadequate for their task. The Force Headquarters ship, HMS *Tyne*, was equipped with a total of 16 transmitting and 22 receiving lines. This fell far short of requirements. General Beaufre, the French military commander, was sufficiently dissatisfied with arrangements on board *Tyne* to shift his flag to a French ship. Lack of facilities on board *Tyne* made it impossible to accommodate both the Joint Operations Centre (JOC) and the Joint Fire Support Committee (JFSC) on this ship and the latter was put on board the LSH(S) HMS *Meon*. *Meon* had been designed to act as brigade headquarters ship in the divisional assault in company with an LSH(L). As far back as 1950 AWHQ had reported that it was inadequate as an LSH in its own right as it lacked the necessary accommodation and equipment.<sup>16</sup> The separation of the JOC and JFSC in two different ships was very unsatisfactory. With *Tyne* sailing off Cyprus while *Meon* was still at Malta effective liaison was very difficult to achieve. Signals traffic was so congested that Operational Immediate messages were taking eight hours in transit.<sup>17</sup>

The provision of amphibians was a considerable problem for the British. Study of the beaches at Port Said showed that LCAs would beach about 100 yards from the shore line. The beach itself was about 200 yards deep and troops assaulting from LCAs would thus be very vulnerable until the beach area was secured. For this reason it was decided that LVTs, originally only to be used in the build-up, would be employed for the initial wave. Only 16 obsolete *Buffaloes* could be made available. For years AWHQ had pressed for the provision of modern LVTs. In 1952 it had been reported that, although Britain

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<sup>15</sup>. Ibid.

<sup>16</sup>. COS (56) 412, 19 November 1956, report by CAW; DEFE 5/72. Andre Beaufre, *The Suez Expedition 1956*, (London: Faber and Faber, 1969) p.46-47.

<sup>17</sup>. ADM 116/6209.

had 37 LVTs, these were all obsolete World War Two types, unfit for operational use.<sup>18</sup> In 1956 there was nothing else available.

There was no regular Army unit equipped with amphibians so No.1 Troop LVT, Royal Armoured Corps had to be formed with men from the RAC Training Brigade. Under Captain P.S.Berry of the 7th Royal Tank Regiment one officer and 32 men were ordered to Fremington to learn to operate LVTs. They had only a few days to master the vehicle's mechanics and learn the rudiments of seamanship before being flown to Malta to join their vehicles. Within these few days they demonstrated their proficiency by accidentally ramming the Appledore lifeboat when an LVT went hard astern on both tracks. The vehicles arrived at Malta in good condition but were short of boat stores, various essential tools and spare parts. Repairs had to be improvised. The problem was exacerbated by the fact that there was no fitter available in Malta with experience of LVTs. Once at Malta 1 LVT Troop, RAC undertook extensive training with the Commandos they were to land in the assault. Major Kenneth Macksey, the historian of the Royal Tank Regiment, notes that it is fortunate that the Commandos were so eager to cooperate with and help these novice crews.<sup>19</sup>

LVTs were not the only amphibians that were in short supply. Extraordinary lengths were gone to in order to acquire the necessary vehicles. D.M.J. Clark, a reservist officer of the 95th Amphibious Observation Regiment, recalled a fellow officer's surprise at the arrival of a number of DUKWs at Fremington:

He was staring open-mouthed, in the direction of the gateway to the camp.....Edward's interest was occasioned by the fact that this particular DUKW was decorated in a manner reminiscent of a barber's pole, in red, white and blue stripes. It passed close by us, near enough for us to see painted on the gunwale the name *Saucy Sue*, and on a notice board still attached to the side, the legend "*Long Trips on the Briny. Adults 2s 6d. Children Half Price*".<sup>20</sup>

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<sup>18</sup>. See chapter four, page 126-127.

<sup>19</sup>. Major Kenneth Macksey, **The Tanks. The History of the Royal Tank Regiment, 1945-1975**, (London: Arms and Armour Press, 1979) p.126. ADM 202/455.

<sup>20</sup>. D.M.J.Clark, **Suez Touchdown. A Soldiers Tale**, (London: Peter Davis, 1964) .8-9.

Lack of sufficient landing craft was a major limiting factor throughout the planning process for *Musketeer*. The COS discussed this problem as early as 30 July. It was noted that sufficient LCAs existed to lift less than one Commando in the assault.<sup>21</sup> The use of LVTs on 6 November mitigated somewhat the lack of LCAs. The landing ships and craft both in commission and brought forward from reserve were sufficient to allow an amphibious assault over the beaches of two Commandos with few supporting arms. However, old and worn out LCA(1)s had to be used in the assault alongside the new LCA(2). The LCA(1)s brought out of reserve were in a poor state of repair and this had a marked impact on training.<sup>22</sup>

The French were no better prepared for amphibious operations than the British. According to General Beaufre, the officer who was to command the French Amphibious Assault Group came straight from a scientific office where he had been studying the ionisation of the stratosphere. The Amphibious Centre at Arzew, which should have been the source of amphibious specialists, had been disbanded to form a Marine Brigade. The French had no equivalent of the AW Squadron and thus had to start from scratch. The old LSD *Foudre* had to sail from Saigon around the Cape. The first amphibious exercise, held on 30 August, was a near catastrophe. The sea was running high and one landing craft almost capsized. Beaufre recalled that General Massu, the parachute commander he placed in charge of the assault echelon, was in a mood to label all amphibious operations as inventions of the devil. Troops previously engaged in counter-insurgency operations in Algeria had to be retrained and had to familiarise themselves with new equipment. The 10 Parachute Division needed refresher parachute training, while the 7 Division Mechanique Rapide had been dismounted and on reduced establishment for six months. Much had to be done to prepare units for possible operations in Egypt.<sup>23</sup>

Two battalions of the Royal Tank Regiment (RTR), the 1st and the 6th, were earmarked for operations in Egypt. There was considerable confusion as to which battalion was to sail first. However, as the 6th RTR embarked into naval LSTs at Plymouth while the 1st RTR

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<sup>21</sup>. COS (56) 74 mtg, 30 July 1956; DEFE 4/89. COS (56) 293, 2 August 1956; DEFE 5/70.

<sup>22</sup>. ADM 116/6209.

<sup>23</sup>. Beaufre, *The Suez Expedition*, p.40-45.

embarked into requisitioned civilian LSTs at Portsmouth, the 6th was considered the most suitable for landing in the assault. Thus 6 RTR sailed for Malta between 23 August and 2 September.<sup>24</sup> On arrival the units attempted what training was possible at Malta, although the narrow roads and restricted fields of that island made it unsuited for this purpose. C Squadron practised loading into LCTs and conducted a landing over the beach in Mellieha Bay.<sup>25</sup>

The first outline plan for military action against Egypt was submitted to the Egypt Committee by the COS on 2 August. All thought of a rapid *coup de main* was abandoned:

The concept of operations is based on poisoning a ring of forces within striking range of Egypt. When this is sufficiently far advanced, an ultimatum will be issued, failing acceptance of which a maritime blockade and air action will be instituted and - if this is still necessary - an assault will be made to the northern end of the canal and a threat posed to Alexandria.<sup>26</sup>

The Chiefs noted that the availability of landing craft was the limiting factor to the strength of the first assault wave. LCAs could be made available to land about 800 men. This could be increased if LCTs were employed landing personnel, but this would be at the expense of vehicle lift. As the assault forces which could land by sea were so limited, the COS recommended that a heavy scale of air attack would be required to ensure that the landings did not encounter serious opposition. Similarly, it was recommended that the seaborne assault be supported by the maximum possible parachute drop. Land operations in the initial stages would be directed at seizing Port Said with the Commandos. One British parachute battalion and possibly a French parachute battalion could be dropped in direct support of the amphibious landing. After Port Said had been seized, the remainder of the Parachute Brigade group and an infantry brigade group would be landed, followed by an infantry division less a brigade group. These forces would break out of the beachhead, secure airfields, occupy Suez and seize the bridges and ferries across the canal. Further reinforcements would proceed as required and control would eventually be extended throughout the Canal area and, if necessary,

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<sup>24</sup>. ADM 116/6209.

<sup>25</sup>. Macksey, *The Tanks*, p.127-130.

<sup>26</sup>. COS (56) 293.

elsewhere in Egypt. The earliest date at which sufficient lift for two Commandos could be provided, with one Commando in the assault wave, was in six weeks time. The COS were aware that the assault forces would require time for training and rehearsals before actual operations could be undertaken.<sup>27</sup>

The COS invited each Service to appoint a commander for the projected operations. The officers nominated by the Army, Navy and RAF were, respectively: Lieutenant-General Sir Hugh Stockwell, Vice-Admiral M.Richmond, and Air Marshal D.H.F.Barnett. These officers and their staffs assembled between 1 and 4 August in the Montague House annex of the War Office. On 24 October Richmond was succeeded by Vice-Admiral D.F.Durnford-Slater, a former commandant of the Amphibious Warfare Centre. On 6 August the first Joint Task Force Commanders meeting took place. Three days later a meeting of the COS agreed that a single Allied Commander-in-Chief should be appointed, nominating the Commander-in-Chief, British Middle East Land Forces, General Sir Charles F.Keightley. The French provided officers to act as deputies to their British counterparts and to control their national forces during any operations. Their Army, Navy and Air Force commanders were, respectively: General de Division A.Beaufre, Contre-Amiral P.Lancelot and General de Brigade R.Brohon. Vice-Amiral D'Escadre P.Barjot was deputy to Keightley. Integrated planning with the French began on 16 August.<sup>28</sup>

The first outline plan was directed specifically against the Suez Canal area. Sir Hugh Stockwell and General Beaufre believed that a landing at Alexandria would be more advantageous. They considered that while a landing at Port Said would yield immediate control at the entrance to the Canal and that coastal defences there were very light, there were a number of key disadvantages. The beaches were very shallow and muddy and unloading facilities in Port Said were limited. This would ensure a difficult landing and slow build-up of forces. The beaches were close to the town and this would inevitably result in much damage to houses and civilian property. In addition, the town's water supply could easily be cut off with severe consequences for the

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<sup>27</sup>. Ibid.

<sup>28</sup>. DEFE 7/1081; **Operations in Egypt - November to December, 1956**, official despatch by General Sir Charles Keightley.

civilian population. It was important to capture airfields early, and the most suitable airfield, Abu Sueir, was 50 miles from Port Said. Any delays in reaching airborne forces dropped there could have serious repercussions. The town itself was linked to the mainland by a 25 mile long causeway running along the canal. Enemy troops dug in along this narrow causeway could delay any advance. According to Stockwell: "*Port Said was like a cork in a bottle with a very long neck*".<sup>29</sup>

In contrast Alexandria had excellent harbour facilities and there were good landing beaches nearby. The Egyptian forces in the area were small and it was a considerable distance from any likely concentration of Egyptian armoured forces. Coastal defences, although heavier than at Port Said, could be knocked out and Dikheila airfield captured immediately. The commanders considered that 80,000 men would be required to invade Egypt. Of these, Britain could provide two-thirds, including the 16 Parachute Brigade, 3 Commando Brigade, 3 Division from the United Kingdom and 10 Armoured Division from Libya.

The force commanders' outline plan consisted of three phases, preceded by two or three days and nights of bombing and ground attack operations designed to destroy the Egyptian air force. The first phase would consist of an assault by the Commandos on the beaches close to, or inside, Alexandria harbour. This would follow the neutralisation of the coast defences by air and naval bombardment just prior to the assault. Simultaneously, two airborne assault operations would be launched to capture the airfield and the causeway from Alexandria. The leading brigade group of 3 Infantry Division would then land in Alexandria harbour. The second phase consisted of the extension of the bridgehead and build-up of 3 Infantry Division, followed by a quick advance on Cairo via the desert to capture the high ground west of that city. In the third phase, 10 Armoured Division, 7 Division Mechanique and two infantry divisions would be built up. There would then be an advance into the Cairo area before moving off towards the Canal. It was assumed that the Egyptian Army would be engaged in battle within fourteen days of landing and that its defeat would prompt the fall of Nasser. The plan was

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<sup>29</sup>. Kyle, *Suez*, p.172.



approved as a basis for planning by the Egypt Committee on 10 August. The landing was originally scheduled for 15 September.<sup>30</sup>

The Alexandria plan was clearly influenced by the experience of British and American landing operations in the Mediterranean in 1943 and 1944. First of all, the enemy airforce would be neutralised and air superiority secured. Then a beachhead would be seized by seaborne forces supported by the gunfire of the fleet, while paratroops captured airfields and other valuable targets inland and follow up troops secured the bridgehead. This would be followed by an extended period, in which the forces were built up before breaking out of the bridgehead and defeating the main force of the enemy. The whole process was to be preceded by a period of intense preparation and careful planning. Even the command structure adopted mirrored that employed by the Anglo-Americans in World War Two.

A key problem for the planners was the lack of adequate bases in the eastern Mediterranean. It soon became clear that neither Jordan nor Libya would allow Britain to launch an attack on Egypt from bases within their territory. Lack of adequate harbours, anchorages or landing craft "hards" in Cyprus made it unsuitable as a base for launching a seaborne assault. Only at Famagusta could ships berth alongside, but capacity there was limited to five vessels of not more than 5,000 tons each. At the other port, Limassol, there were no wharfs and all loading was conducted by lighter. Malta had fine facilities and an excellent harbour, but was over 900 miles from the Canal; six days sailing time for a slow amphibious convoy. Cyprus also lacked adequate stores, warehouses and airfields. At the outset of the crisis only the island's civilian airfield at Nicosia was in operation, and that was under reconstruction and not working to full capacity. The RAF airfield at Akrotiri was still under construction and Tymbou, the only other airfield, was merely an emergency landing ground. Not until late October were these two airfields fully operational.<sup>31</sup>

Throughout August Britain conducted preparations for military operations. On 2 August the Queen signed a Royal Proclamation ordering the recall of a limited number of reservists to the colours

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<sup>30</sup>. EC (56) 15, 10 August 1956, memo by the COS; CAB 134/1217.

<sup>31</sup>. DEFE 7/1081. Barker, *Suez*, p.37.

and the retention of those regular soldiers due for discharge. HMS *Bulwark* sailed for the Mediterranean, arriving at Malta on 25 August to add her three squadrons of Sea Hawks to the *Eagle's* mixed complement of Sea Hawks, Wyverns, Sea Venoms, Skyraiders and Gannets. A third aircraft carrier, HMS *Albion*, left the United Kingdom for Malta on 15 September. Landing ships began to gather at Malta and the Commandos and Paratroops assembled at Malta and Cyprus respectively. RAF Transport Command and the Royal Navy were stretched to transport the required men and equipment to the Mediterranean. Civil airliners were chartered and ships were requisitioned to meet the demand. Extra paratroops and the headquarters of 16th Independent Parachute Brigade were brought to Cyprus aboard the Training Squadron carriers *Ocean* and *Theseus* and the cruiser HMS *Cumberland*.<sup>32</sup>

*Musketeer* was postponed from 15 September to the 19 and then 26 September as the political wrangling associated with the crisis continued and Britain sought an excuse to intervene. In order to begin operations on 26 September, a decision in principle was required on 9 September and shipping was due to sail on the 15th. However, both these dates passed without the necessary action being taken. The further delays caused increasing problems. Vehicle batteries and other equipment deteriorated as they lay idle in ships. Troops became disgruntled as boredom set in and this was exacerbated amongst some reservists by financial problems. Minor disturbances began to occur amongst reservists during September and October.<sup>33</sup>

On 7 September the Minister of Defence circulated a paper to the Egypt Committee setting out the implications of the postponement of *Musketeer*. He noted the problems associated with maintaining men and equipment at sea for appreciable periods. *Musketeer* could not be delayed indefinitely. The onset of winter threatened to cause difficulties for any major assault landing. Operations from Tymbou airfield could not be relied upon after mid-October and hence the use of the French airborne troops could become problematical. It was pointed out that the longer the delay, the stronger Egypt's defences

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<sup>32</sup>. Fullick and Powell, *Suez*, chapter 5. Grove, *Vanguard to Trident*, p.186-187.

<sup>33</sup>. Barker, *Suez*, p.56-57.

would become without any commensurate improvement in Allied offensive capabilities.<sup>34</sup>

As an annex to this paper, General Keightley submitted an alternative concept based primarily on the use of force by the Royal Navy and RAF. The plan presumed that the 18 nations of the London Conference would impose a financial blockade on Egypt and that they would pay no Canal dues to the Egyptians. Once the Egyptians provided a suitable *casus belli*, Britain and France would initiate an air offensive and naval bombardment directed against the Egyptian armed forces and oil supplies. The offensive would continue until Nasser was forced to capitulate. A land force, the equivalent of three divisions, would then land at Port Said and occupy the Canal Zone. The timing of this landing would depend on how long it took the air offensive to reduce the Egyptians to the point where they were incapable of organised resistance. Keightley considered that this would prove a more economical operation than *Musketeer*, would cause fewer civilian casualties and damage less property than an assault landing at Alexandria. Being based on air power the plan could be put on short notice and postponed indefinitely.<sup>35</sup>

On the morning of 7 September Anthony Eden discussed this new concept with Monckton, Keightley and the COS and following an acrimonious debate was eventually won over.<sup>36</sup> The COS submitted an outline plan to the Egypt Committee on 10 September and this was approved by the Committee on 19 September. It was appreciated that while much smaller forces would be required than for the Alexandria plan, the possibility of an opposed landing could not be discounted. There would be no Allied troops on Egyptian soil in the early stages of the plan and the British and French governments could be open to pressure to call off air operations. However, provision was being made for a landing on Egyptian territory fairly early, providing that the air offensive had been effective in bringing an end to organised resistance.<sup>37</sup>

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<sup>34</sup>. EC (56) 43, 7 September 1956, memo by the Minister of Defence; CAB 134/1217.

<sup>35</sup>. Ibid.

<sup>36</sup>. Robert Rhodes James, **Anthony Eden**, p.507-509. EC (56) 25 mtg, 7 September 1956; CAB 134/1216.

<sup>37</sup>. EC (56) 47, 10 September 1956, report by the COS; CAB 134/1217. EC (56) 30 mtg, 19 September 1956; CAB 134/1216.

## Chapter Five: Table Two

### Aircraft Carrier Air Groups During *Musketeer*

<b>HMS Eagle</b>	897 + 899 Squadron	24 Sea Hawks
	892 + 893 Squadron	17 Sea Venoms
	830 Squadron	9 Wyverns
	849 Squadron	4 Skyraiders
<b>HMS Bulwark</b>	804 + 810 + 895 Squadron	30 Sea Hawks
<b>HMS Albion</b>	800 + 802 Squadron	19 Sea Hawks
	809 Squadron	8 Sea Venoms
	849 Squadron	4 Skyraiders
Sea Hawk	-	jet fighter/strike aircraft
Sea Venom	-	all weather jet fighter
Wyvern	-	turbo-prop strike aircraft
Skyraider	-	American supplied AEW aircraft

The French aircraft carriers, *Arromanche* and *Lafayette* , were equipped with a total of 32 Corsair and 12 Avenger piston engined aircraft. These were obsolete Second World War types.

The first date at which the revised *Musketeer* plan would be adopted was 1 October. This was put back to 8 October to allow the crisis to be placed before the United Nations Security Council. No decision had been taken to activate the plan by 29 September, the date shipping movement was due to commence and *Musketeer* was placed at ten days notice. It was becoming apparent that a plan was needed which could be held at extended notice and yet still provide the Allies with military options during the approaching autumn and winter. Accordingly, Keightley instructed the force commanders to draw up a Winter Plan to allow for uncertain weather and using only those forces available in the Mediterranean area. The plan was completed by 12 October, although the writing of detailed operational orders was left to a later stage. The Winter Plan was due to come into effect on 21 October, but on 18 October Keightley signalled that *Musketeer Revise* would remain in force indefinitely. The Winter Plan was put in abeyance.<sup>38</sup> It had been left behind by political developments. Secret negotiations between France, Britain and Israel culminated on 24 October in the secret Protocol of Sevres. It was agreed that on 29 October Israeli forces would launch an attack against the Egyptians in the Sinai. The following day Britain and France would appeal for a cease-fire and for the withdrawal of combatants to ten miles either side of the canal. If Nasser refused, as he certainly would, the Allies would have their excuse to intervene.<sup>39</sup>

Under cover of a communications exercise, *Boathook*, the headquarters ship HMS *Tyne* sailed from Malta to Cyprus on 27 October carrying the naval and military commanders. Two days later Flag Officer Aircraft Carriers, Vice-Admiral Manley Power, sailed his three strike carriers from Malta in company with two cruisers and sixteen destroyers. In order to carry the maximum number of strike and ground attack aircraft, no Gannet anti-submarine squadrons were embarked, see Table Two.<sup>40</sup>

On 29 October, as arranged, the Israelis launched their attack against Egypt. The next day, Britain and France duly issued their ultimatum. Egypt and Israel were called upon to withdraw their forces ten miles from the Suez Canal, and Egypt was asked to accept a temporary occupation of the Canal Zone to protect navigation of the waterway.

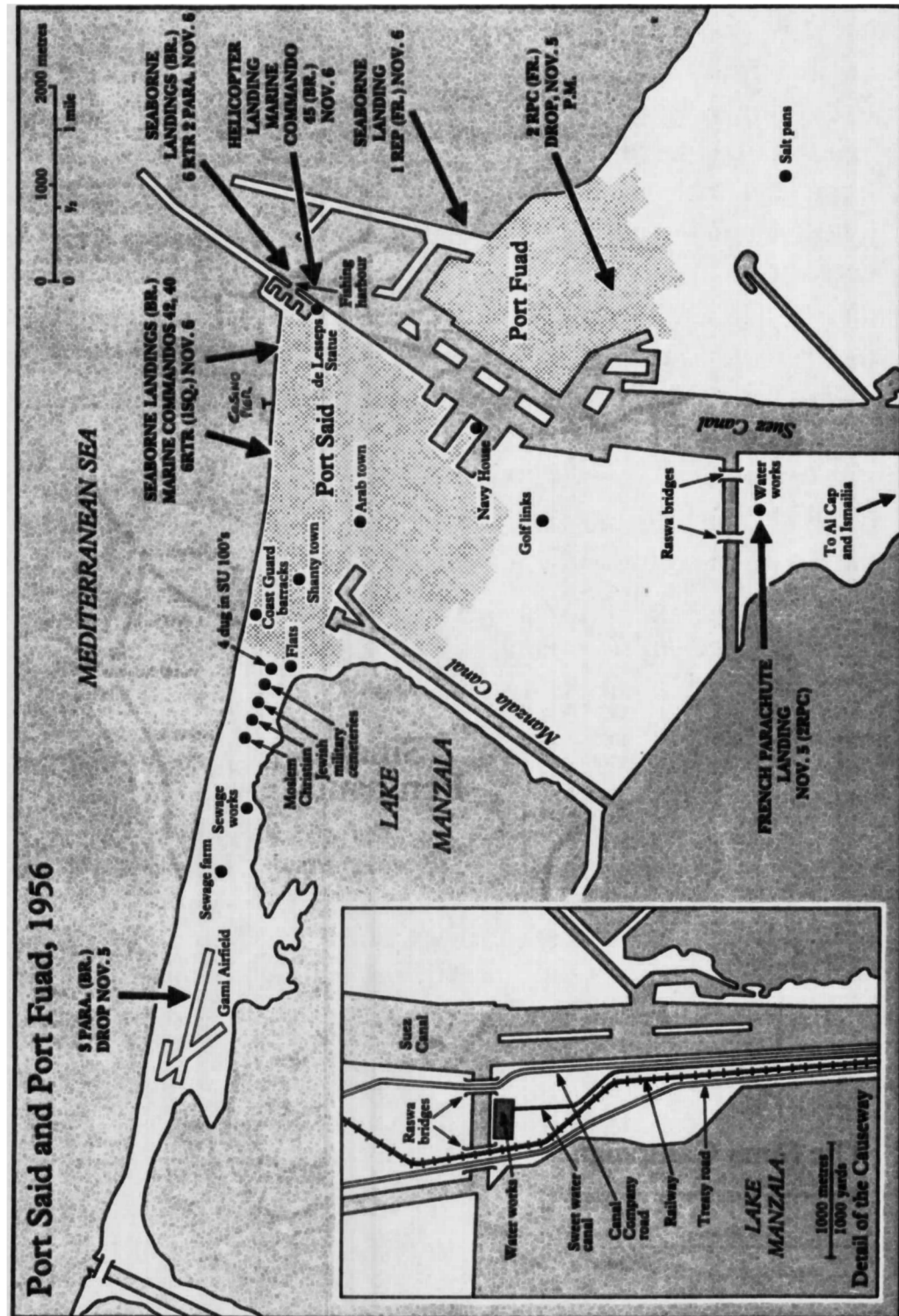
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<sup>38</sup>. ADM 116/6209.

<sup>39</sup>. Kyle, *Suez*, p.312-331.

<sup>40</sup>. ADM 116/6209. "The Aircraft Carrier Aspects of Musketeer", in *Naval Review*, Volume 45, 1957 p.124-130.

**Map One. Port Said and Port Fuad, 1956.**



As expected, the ultimatum was accepted by Israel and rejected by Egypt.

The Allies opened hostilities on the evening of 31 October with high level bombing raids on Egyptian airfields by RAF Canberra and Valiant bombers. At dawn on 1 November both land based and carrier based ground attack aircraft joined the offensive, conducting a series of low level raids. The Egyptians put up no serious resistance in the air and by 2 November the Egyptian Air Force had ceased to exist as an effective fighting force. Collusion with Israel meant that there was little time for extended air operations designed to break the will of the enemy. It was decreed that air attacks would be confined to military targets and to Cairo radio. Civilian lives and property were to be guarded, although the aircraft were considerably hampered in their attacks by the willingness of the Egyptian military to use civilians as a shield.<sup>41</sup>

The plan was for a combined amphibious and airborne landing at Port Said on 6 November. This date was set as the amphibious convoy would take six days to steam from Malta and could not sail before the expiry of the ultimatum. British paratroops were to seize Gamil airfield, to the west of Port Said, thirty minutes after the Royal Marines landed from the sea. French paratroops would seize two vital bridges at Raswa and also seal off Port Faud, see Map One. Brigadier Madoc described the seaborne assault thus:

It was intended to assault astride the Casino Pier with two Commandos up. Assault troops were to be carried in LVTs and LCAs with, on the left, 40 Commando RM and on the right, 42 Commando RM. H hour for these landings was to 35 minutes after sunrise. There were to be pre-H hour air strikes and gunfire support to destroy the beach defensive positions and guns, and allied parachutists were to drop half an hour after H hour.

The two Commandos would establish a small beachhead and, strengthened by the arrival of tanks, they were to break out to the south.<sup>42</sup>

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<sup>41</sup>. Kyle, *Suez*, p.415. **Report by Air Task Force Commander on Operation *Musketeer***, 17 November 1956; AIR 20/10746 EC (56) 37 mtg, 1 November 1956; CAB 134/1216.

<sup>42</sup>. ADM 202/455.

One interesting aspect of Operation *Musketeer* was the inclusion of a helicopter landing by 45 Commando. The use of helicopters in the assault was entirely new to British practice. Aware of developments in the United States, AWHQ had pressed vigorously and unsuccessfully to have the Commandos train with helicopters in the vertical envelopment role.<sup>43</sup> Prior to the Suez crisis the Admiralty had decided to convert the aircraft carrier HMS *Bulwark* to carry helicopters for use in amphibious operations but there had not yet been time to act on this decision.<sup>44</sup> Although an accepted part of American amphibious practice, employment of helicopters in the assault was yet to be tested in combat.

As originally conceived, 45 Commando was to be dropped into the Inner Basin at Port Said to seize the bridges at Raswa. As such, they would be dropped into a known defended area and in the rear of the main Egyptian forces at Port Said. On 31 October the force commanders cancelled this drop. Instead, 45 Commando was to be held as a floating reserve. The landings were cancelled for two reasons. There were not enough helicopters available to land a force in one lift sufficient to meet the military threat at the objective. The troops landed in the initial wave could be placed under intense pressure before support arrived. Secondly, the use of helicopters in such a role was an untried operation of war and there were doubts as to whether a landing in, or close to, a defended area was practicable.<sup>45</sup>

Two squadrons earmarked for the helicopter assault: the Joint Experimental Helicopter Unit (JEHU), which was a joint Army and RAF formation, and the Royal Navy's 845 Squadron. Like the Commandos they were to carry, neither of these two squadrons had ever practised in the assault role. During the first two weeks of October, the squadrons conducted trials and training aboard the light fleet carriers HMS *Theseus* and HMS *Ocean* in the Solent. These two carriers had been operating as troop transports since July and work had been undertaken to convert them to this role. *Ocean* was also

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<sup>43</sup>. See chapter three, page 109-110.

<sup>44</sup>. See chapter six, page 170.

<sup>45</sup>. The account of operations at Port Said is based primarily on the operational reports of Brigadier Madoc (ADM 202/455), Admiral Richmond (ADM 116/6209) and General Keightley (DEFE 7/1081).



being equipped as a hospital ship. On 26 September the plans were changed and these two ships were swiftly adapted to carry helicopters.<sup>46</sup> They practised deck handling, deck landing, formation take offs and landings and mass formation flying. The training resulted in the squadrons being fully integrated with the air divisions of the carriers and becoming accustomed to the alien environment of the aircraft carrier. In its twelve days of training between 1 October and 12 October JEHU undertook 611 deck landings with a total flying time of 163 hours.<sup>47</sup>

HMS *Theseus* arrived at Malta on 19 October, followed by *Ocean* on the 31st. On 1 November limited operational training was carried out with 45 Commando. All troops rehearsed enplaning and deplaning and the Commandos experimented with the best stowage for different types of ammunition and stores. Although only one full day of training was carried out, it was not believed that this would cause a problem. In his report on *Musketeer* the commander of the JEHU, Lieutenant-Colonel J.F.T.Scott, noted that "*The helicopter is a simple means of transport and needs little rehearsal as far as the soldier is concerned*".<sup>48</sup> In any case, a full dress rehearsal of the landing would have been prejudicial to security. The two assault carriers left Malta unescorted at 16.00 on 3 November and proceeded to the assault area at 17 knots.

In light of the apparent weakness of Egyptian forces and the increasingly severe criticism of Britain and France by the international community, on 4 November it was decided to implement Operation *Telescope*, a plan to conduct the parachute landing on 5 November, the day before the seaborne assault. This involved some risk as the Egyptians were known to have armour in Port Said and the paratroops would be without heavy support until it could be landed from the sea. The airborne landings were entirely successful. The French secured Port Faud and the objectives at Raswa while the British paras took Gamil airfield and advanced to the edge of Port

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46. Norman Friedman, **British Carrier Aviation. The Evolution of the Ships and their Aircraft**, (London: Conway Maritime Press, 1988) p.345.

47. **Employment of the JEHU on Operation *Musketeer***, report by Lt-Col J.F.T.Scott, commanding officer of JEHU; WO 288/76.

48. Ibid.

Said, where they were held up by lack of ammunition and heavy support weapons.<sup>49</sup>

Embarkation of the seaborne force at Malta was initially covered as a loading exercise. The Commando Brigade completed loading on the evening of 30 October and sailed for the assault area at midnight. The convoy had planned to sail at six and a half knots, however the old LSTs and LCTs managed to maintain eight knots despite a head wind. On 4 November they received the signal that *Telescope* was to be implemented. Due to its increased speed, the convoy could have been off Port Said by 09.30 GMT on 5 November, and thus in a position to launch its troops swiftly behind the paras.<sup>50</sup> Admiral Durnford-Slater was made aware of this but preferred to stick to the original plan in order to better co-ordinate the British and French assaults. A seaborne landing on 5 November would have required a complete re-writing of the fire support plan and would have had to be conducted at dusk, further increasing the chances of confusion and costly mistakes. Reportedly, Vice-Admiral Power suggested an immediate helicopter landing of 45 Commando to support the paratroops. This too was rejected.<sup>51</sup>

At 02.00 on 6 November the LCTs carrying the tanks of C Squadron 6 RTR, adopted the assault formation off Port Said prior to moving in to the beaches. The three LST(A)s HMS *Striker*, *Reggio* and *Anzio* accompanied an LST(3) to an inshore lowering position one and a half miles off Port Said. Between 04.00 and 04.30 the LSTs lowered their assault craft and disembarked their amphibians, loaded with the troops and equipment of 40 and 42 Commando.<sup>52</sup>

There were no special support craft or support amphibians available for use at Port Said. The assaulting Commandos had to make do with air strikes and gunfire support from the fleet. Fear of civilian casualties brought an order on 4 November that the pre-assault bombardment would be limited to guns of 4.5 inch calibre or less. This ruled out the 6 inch guns of the British cruisers *Jamaica* and

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<sup>49</sup>. Fullick and Powell, *Suez*, p.129.

<sup>50</sup>. ADM 116/6209. Anglo-French forces allocated to *Musketeer* used Greenwich Mean Time which was two hours behind local time. All further times in the text are GMT unless otherwise stated.

<sup>51</sup>. Memoirs of Sir Manley Power, p.102.

<sup>52</sup>. ADM 116/6209.

*Ceylon* and the 15 inch guns of the French battleship *Jean Bart* . At the last minute the force commanders were ordered to scrap the entire bombardment. Such an order opened up the possibility of heavy casualties for the assaulting Commandos and so, exploiting the semantic difference between Naval Gunfire Support and Bombardment, this order was effectively ignored.<sup>53</sup>

The destroyers HMS *Decoy* and HMS *Chaplet* provided support for 42 Commando while two *Daring* class destroyers fired in support of 40 Commando. They subjected the beaches to 45 minutes of drenching fire, expending 920 rounds. The fire was effectively controlled by Forward Observation Parties from the Amphibious Observation Regiment in the assault craft and amphibians. As there were no support craft to suppress the defenders, once the destroyers lifted their fire, aircraft strafed the beach for the last ten minutes. The preliminary bombardment was controlled and accurate, and the Commandos got ashore against only minor opposition. However, that is not to say that it would have been sufficient against a determined enemy or prepared defences. Pre-assault air strikes had neutralised coastal defence guns at Port Faud and on the breakwater at Port Said. It was subsequently found that the emplacements on the breakwater were still intact and, had their occupants possessed firmer resolve, their twin 6 pounder mountings could have inflicted heavy casualties on the Commandos.<sup>54</sup> The fleet remained on call after the landings were effected but the only fire that was required was from HMS *Decoy* and *Chaplet* which were given permission to silence SU 100 armoured vehicles which had opened fire.<sup>55</sup>

At 04.50 the leading waves of 40 and 42 Commando came ashore and crossed the beach in their LVTs. 40 Commando landed on the beach east of the Casino Pier (SIERRA RED) and 42 Commando landed to the west (SIERRA GREEN). The second wave, landing in assault craft, endured a 35 yard wade. Shortly after 05.00, the four LCTs landed the 14 waterproofed tanks of C Squadron 6 RTR in four and a half feet of water west of the breakwater. It took HMS *Rampart* only eleven minutes to beach, land three Centurion tanks and an armoured

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<sup>53</sup>. Clark, *Suez Touchdown*, p.63-64.

<sup>54</sup>. ADM 116/6209. ADM 202/455.

<sup>55</sup>. ADM 116/6209.

recovery vehicle, raise the ramp and prepare to debark.<sup>56</sup> Due to the beach gradient, and in the absence of suitable craft, no other vehicles could be landed across the beach except five Champs landed from LCA(2)s. In order to ease the problems of ammunition supply which this might have raised, tanks of C Squadron towed ashore seven one ton trailers which they dumped at the back of the beach.<sup>57</sup>

It has already been noted that the LVTs employed were obsolete War veterans. They were unarmoured and the need for pin on armour was appreciated. Prior to 6 November Brigadier Madoc requested such armour, but none arrived. In the event, the open-topped LVTs went into the assault without armour, fitted machine guns or radios. As such, they were vulnerable even to small arms fire.<sup>58</sup> A Forward Observer Bombardment attached to 42 Commando was less than impressed with these vehicles:

Buffaloes! Motorised shoe-boxes would be an apter name! Just imagine us packed like sardines, moving slowly along the road, with no head cover and a bastard in every window taking pot-shots at us and dropping grenades.<sup>59</sup>

The LSTs carrying the LVTs were so old that they were unable to flood down before launching their vehicles. At Malta the LVTs were practised in launching dry into the sea, something previously thought too dangerous, and this method was satisfactorily adopted in the assault. The low speed of the LVTs while at sea, estimated at four knots, necessitated the use of an inshore lowering position, which would have been dangerous against more serious opposition.<sup>60</sup>

The LCTs *Portcullis* and *Bastion*, carrying the Commando's attached anti-tank platoons, landed their cargoes directly into the fishing harbour at 05.20. These LCTs were followed by others containing the remaining tanks of C Squadron 6 RTR and at 08.30 the first LST began to unload at Casino Wharf. The LST(3) ,HMS *Puncher*, berthed at 09.18, commenced unloading and had completed by

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<sup>56</sup>. ADM 53/144912, HMS *Rampart*, Ships Log.

<sup>57</sup>. ADM 202/455.

<sup>58</sup>. Ibid.

<sup>59</sup>. Clark, *Suez Touchdown*, p.92.

<sup>60</sup>. ADM 116/6209.

10.03.<sup>61</sup> By nightfall a total of 14 LSTs had discharged men, stores and vehicles at either the Casino pier or the fishing harbour.<sup>62</sup>

The French assault force of 1st Regiment Etranger Parachutists and three Naval Commandos, supported by a squadron of AMX light tanks in LCMs, landed at the beaches off Port Faud. The French had no LST(A)s and landed their infantry in LVTs from LSTs and in LCMs from *Foudre*. The French were fortunate in having an LSD as the LCMs it carried were more suitable for landing vehicles in shallow water than either LCAs or LCTs. The success of the French parachute assault of the previous night meant that this landing was unopposed.<sup>63</sup>

At 05.40 45 Commando was ordered to land within the Beach Area already secured by the Marines. The 22 helicopters of the JEHU and 845 Squadron landed 425 men with 23 tons of ammunition and stores in 89 minutes. Disembarking near the De Lessops statue, to the south-east of the seaborne landings, the Commandos were established ashore at 07.14. Their transport came ashore later in the day. That the helicopter could absorb considerable damage and still fly was proven by an incident immediately prior to the landing. A Whirlwind Mk.22 used to recce possible landing sites had the misfortune to land in a sports stadium still occupied by Egyptian troops. The commanding officer of 45 Commando, Lieutenant-Colonel Tailour, had disembarked with a small staff before the pilot realised what had happened. The pilot was able to re-embark the Marines without casualty but not before the aircraft was hit at least twenty times by small arms fire. Hits to both the main and rear rotor blades failed to ground the aircraft.<sup>64</sup> The first operational use of helicopters to land troops during a seaborne assault was a complete success. With the makeshift helicopter carriers lying nine miles offshore, 45 Commando was landed far more quickly than would have been possible by conventional landing craft. The assault troops left with weapons and

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61. ADM 53/143055, HMS Bastion, Ships Log. ADM 53/144884, HMS Portcullis, Ships Log. ADM 53/144900, HMS Puncher, Ships Log. Barker, Suez, p.158.

62. Barker, Suez, p. 158.

63. Ibid. p.155-156. ADM 116/6209.

64. Lt-Col R.D.Crombie, *Employment of Helicopters in an Assault Role*; ADM 202/455. Barker, Suez, p.152. Fullick + Powell, Suez, p.146-147.

ammunition took one hour and twenty minutes to fly in, with the remaining equipment transported during the next hour.<sup>65</sup>

Despite the success of the helicopter lift, those helicopters used were unsuitable for the assault role. Two main types were employed: the Whirlwind and the Sycamore. The Sikorsky Whirlwind was a slightly better load carrier than the Westland version which could carry five fully equipped men to the Sikorsky's seven. Although these figures do not compare favourably with contemporary landing craft they were at least satisfactory given the special nature of the helicopter. The Sikorsky Sycamore, however, was unsuited for use as an assault helicopter. It could carry only three fully equipped men. Captain C.J.Smith RM described the measures which were employed in order to get 45 Commando ashore as quickly as possible:

A loaded Sycamore presented an extraordinary sight. The back seats, side panels, and unessential fittings had been stripped to increase the lift. The three passengers sat on the floor, one hunched in the middle with six mortar bombs on his lap, and the other two with their legs dangling over the side, each holding a 106 mm anti-tank shell about three feet long. The man in the centre was responsible for the two outboard members not falling out. The Whirlwind was a little more orthodox, but there were no seats, doors or windows. The five passengers hung on to any hand hold available .....Communication between troops and pilot in both aircraft was either by shouting or by tugging at the pilot's legs.<sup>66</sup>

The extemporised nature of the helicopter lift is evident. Only two helicopters were lost during the assault. One was grounded due to a badly leaking fuel tank and another crashed into the sea after running out of fuel. Fortunately, the crew and passengers were picked up unhurt.<sup>67</sup>

Fighting in Port Said continued until dark when the link up between the paratroops and Commandos had still not been properly effected. Egyptian opposition consisted mainly of sniping, but isolated pockets, notably at the Navy House, were to put up stubborn resistance. The advance down the Canal had barely begun when news of the

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<sup>65</sup>. ADM 202/455. WO 288/76.

<sup>66</sup>. Captain C.J.Smith, "Suez and the Commando Carrier Concept", in **RUSI Journal** 1963.

<sup>67</sup>. ADM 202/455, **Operation Musketeer - 45 Commando, Unit Report**. ADM 116/6209.

impending cease fire reached the troops. A last minute advance was conducted by a mixed force of paratroops and tanks and by midnight GMT, when the cease fire took effect, the 2nd Parachute Battalion had reached Al Cap, 23 miles south of Port Said.<sup>68</sup>

The military expedition to Suez was a political failure. It did not achieve the goals it was set. Indeed, far from restoring the Canal to international control and prompting the fall of Nasser, the Anglo-French invasion had the reverse effect. The Canal remained firmly in Egyptian hands and was temporarily blocked. Nasser was reinforced in his position as President, while British prestige in the Middle East slumped to an all time low. However, *Musketeer* did achieve a level of operational success. At the time of the cease fire, Anglo-French forces were safely ashore and just beginning the breakout down the causeway. Casualties had been relatively light and they were assured air superiority for the duration of any hostilities. Prior to the cease fire Stockwell was planning an advance by 16 Parachute Brigade on 7 November, supported by tanks and French airborne landings. He hoped to secure a bridgehead at El Qantara by noon at the latest and to be attacking Ismailia by last light. General Beaufre suggests that had a vigorous advance been pursued then Anglo-French forces could have reached Fayid and possibly even Suez by 8 November. General Keightley, in his official despatch, stated that prior to the assault it was estimated that Suez would be taken by 11 November.<sup>69</sup> Given the poor performance of Egyptian troops at Port Said and in the Sinai fighting Israel, it seems probable that this target could have been achieved had the politicians not intervened.

The operation highlighted the extent to which Britain's amphibious capabilities had been allowed to decline. In July there had been barely enough ships available to lift one Commando. Sufficient ships and craft were brought out in time for *Musketeer* but in the words of Vice-Admiral Richmond:

the fact is that the craft and crews were fit and trained on the day, but without the least attempt to achieve

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<sup>68</sup>. WO 288/77.

<sup>69</sup>. Kyle, *Suez*, p.474-476. Beufre, *The Suez Expedition*, chapter 12, WO 288/77. DEFE 7/1081.

“*Rolls Royce*” standards of perfection, the process was difficult and took a long time.<sup>70</sup>

Despite the fact that the Royal Marines had recently been given primary responsibility for amphibious warfare, no Commando unit was ready for immediate amphibious operations. Once prepared for combat the AW Squadron relied on ageing, outdated ships. There were no special support craft. The headquarters ships were inadequate. Ancient assault craft and amphibians had to be employed in the absence of more suitable equipment. The AW Squadron lacked LCMs or their means of carriage and this complicated the landing of vehicles. The helicopters employed in the vertical assault were not suited to Commando operations. In the years before *Musketeer* AWHQ had pressed for action in all these areas. That so little was done is a reflection on Service and in particular Admiralty attitudes towards amphibious capabilities since the War.

The key problem was that neither specialist shipping nor trained troops were available to conduct amphibious operations when the crisis broke. Indeed, despite an official commitment to maintain an amphibious lift for a brigade group in commission and Operational Reserve, this lift was not fully available until the end of September. The Admiralty must bear responsibility for this as it was their choice not to devote sufficient manpower or resources to amphibious forces. However, they cannot be entirely blamed. One should remember that the Parachute Brigade was no more prepared for operations than the Commandos and that the aircraft they jumped from at Port Said were old and inadequate. The simple fact is that, at a time when financial pressure forces the Services to establish priorities, the Navy chose to concentrate on what it saw as its main responsibility, that of protecting the sea lanes against the Soviet threat.

The British have been criticised for their meticulous but slow approach to the planning and execution of *Musketeer*.<sup>71</sup> All the various plans bear the hallmark of World War Two assault operations, particularly the initial plan to land at Alexandria. That there is a major difference between conducting a landing against first class opposition in 1943 and 1944 and the requirement for military

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<sup>70</sup>. ADM 116/6209.

<sup>71</sup>. See Barker, *Suez*, p.35.



action against Egypt is clear and the force commanders should have appreciated this. The fighting qualities of the Egyptian soldier were open to doubt. He had not distinguished himself in the 1948 war against Israel. Certainly the French were more willing to be daring in order to achieve quick military success. They had plenty of experience fighting in North Africa and so could perhaps better gauge the fighting qualities of the Egyptians.

Prior to the outbreak of hostilities Beaufre gained authority to keep a quick reaction force loaded off Cyprus in its amphibious shipping. This "*Plan A*" allowed for the floating material to be joined quickly from Algiers by French assault troops on board the fast battleship *Jean Bart*. However, the plan was only to be implemented if Egyptian opposition could be expected to be negligible.<sup>72</sup> As early as 31 October the French proposed to implement Operations *Omelette*, the early use of parachute forces, in order to get some troops on the ground. The British refused to commit airborne forces with seaborne support so far away. However, they later agreed to *Telescope*, the landing of paratroops on 5 November.<sup>73</sup> It is easy to criticise the British commanders for being too timid in their use of airborne forces. Troops dropped on 2 or 3 November would have been without tanks or vehicles for three days. Support from the air and the guns of the fleet might have protected them at Port Said, at considerable cost to the town, but maintaining links with troops dropped at Qantara and Ismailia would have been problematical to say the least. The memory of Arnhem may have played its part in British reticence in the independent use of airborne forces.

It is conceivable that had the landings at Port Said occurred immediately after the air offensive had destroyed the Egyptian Air Force, then the British and the French might have been able to secure the Suez Canal before the pressure to order a cease-fire became acute. What they hoped to do once they had control of the Canal is an interesting question, but one that is beyond the scope of this study. Had the assault forces been held off Cyprus they could have been ready to land on 2 November when total air supremacy was assured. The limited harbour facilities at Cyprus precluded the AW Squadron from basing there, but the Squadron could have sailed from Malta in

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<sup>72</sup> Kyle, *Suez*, p.241.

<sup>73</sup> Fullick + Powell, *Suez*, chapter 9. Barker, *Suez*, p.114-116. WO 288/77.

anticipation of a landing on 2 or 3 November. Unfortunately, this would have required leaving Malta on 27 or 28 October, before the ultimatum to Egypt and Israel was issued. This could have been done under the thin smoke screen of a major exercise, much as *Boathook* covered the move of HMS *Tyne*. That no-one would have been fooled by such an obvious deception could hardly have mattered as few foreigners believed the lie that there was no collusion between Britain and Israel.<sup>74</sup>

There was a further difficulty. The amphibious assault group would take six days to sail from Malta to Port Said. Unfortunately, the group could only afford to sail for seven or eight days before putting into harbour to re-provision and re-fuel.<sup>75</sup> Thus, premature embarkation involved an element of risk. The amphibious ships and craft could not hover off Port Said for any length of time and so any delay in the air offensive could have caused difficulties. What was required were fast ships capable of reaching their destination at considerably more than six knots and, if need be, of waiting offshore until they were needed. Old worn out War built vessels, hastily brought out from reserve do not provide this kind of capability. Had Britain possessed modern amphibious vessels, such as the American *Thomaston* class dock landing ships, the situation would have been transformed. Sailing at 20 knots these ships could have been off Port Said within two days of leaving Malta and could have hovered offshore awaiting the order to land.<sup>76</sup>

Operation *Musketeer* was, essentially, an old style amphibious operation, competently conducted, with obsolete equipment and a considerable degree of improvisation. A clearer appreciation of political considerations might have caused the Force Commanders to act with greater alacrity. The appointment of Keightley as Commander-in-Chief severed the link between the force commanders, responsible for the actual conduct of operations, and the political factors which were to play such a decisive part in the crisis. Keightley had a political adviser from the Foreign Office, but failed to communicate to his subordinates any need for particular haste. The force commanders had no idea that they might be asked to halt

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<sup>74</sup>. Kyle, *Suez*, p.425.

<sup>75</sup>. *Ibid.* p.240.

<sup>76</sup>. David Steigman, "Amphibious Forces" p.110-120.

operations less than 24 hours after the seaborne assault. In the circumstances to risk landing parachute forces days before significant seaborne support was due to arrive, would have constituted an unnecessary risk. The official report on the parachute drop at Gamil states that:

If there had been no seaborne attack to come the advance could have been continued, especially after the drop of the second lift at 1300 hours which brought the mortars up to fifty rounds per gun. C Company could have carried out another attack and allowed A Company to pass through and seize the docks during the night.<sup>77</sup>

With darkness approaching and a seaborne landing due the next day, there was little reason for the paras to court further casualties by pressing on.

Similarly, there was no need to order the seaborne landings to take place on the evening of 5 November, or for the Commandos to be landed at Gamil by helicopters as suggested by Vice-Admiral Power. Amphibious operations are complex at the best of times. There was little reason to upset the pre-arranged fire support plan and risk the disruption of a landing at dusk, merely in order to save a few hours. The history of British amphibious operations is littered with failure and short of any compelling reason to act otherwise, caution was the best approach. The need for speed is more apparent with hindsight, particularly as complete allied air superiority effectively cut off Port Said from any possible reinforcement.

Perhaps inevitably the concept of creating mobile forces for cold and limited war was given much currency in the aftermath of *Musketeer*. Vice-Admiral Richmond advocated maintaining a "*fire brigade*" ready to deal with trouble when it arose. He recommended maintaining the AW Squadron at a strength of one LSH(S), three LST(A) and four LCT(8) with a further three LST(3) and four LCT(8) in operational reserve. Keightley placed his faith in airborne forces. He considered that an airborne force of two brigades should be maintained for limited war duties. Interestingly, he recommended that this should be supported by trooping carriers equipped with

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<sup>77</sup>. Report on Airborne Assault of Operation Musketeer Mounted on Gamil Airfield, Port Said on 5 November 1956; AIR 20/9577.

helicopters, and provided with air cover by aircraft carriers. All the force commanders stressed the requirement for the Commandos and Parachute Brigade to be available at short notice, highly trained in their specialist roles.<sup>78</sup>

During operations at Port Said the Navy demonstrated the important role it had to play in limited military interventions. In particular the effectiveness of the aircraft carrier as a mobile air base had been proven. Despite problems with one of *Eagle's* old hydraulic catapults, aircraft from the three British carriers conducted a total of 1,614 sorties during *Musketeer*, damaging or destroying 289 aircraft and 150 armoured vehicles and sinking six E-boats. A total of 1,164 of these sorties were offensive, 359 were essentially defensive and the remaining 93 were concerned with reconnaissance and transport. The percentage of offensive carrier sorties increased from 59 per cent on 1 November to 89 per cent on 6 November as the threat of enemy air action receded. Like their naval counterparts at sea, RAF Hunters and Meteors maintained combat air patrols over Cyprus to defend the land based airfields. Carrier based aircraft proved more versatile than the shore based variety. Closer proximity to Port Said meant that carrier based aircraft could spend longer over the target, could carry a full weapons load, and enabled changes in armament and technique to be effected at short notice as the situation demanded.<sup>79</sup> Naval Sea Hawks and Sea Venoms averaged 2.8 sorties per operational day, compared with an average of 1.4 sorties for land based ground attack aircraft. Naval aircraft were responsible for destroying about 60 per cent of the total number of Egyptian aircraft wiped out and were the mainstay of the *cab rank* system of providing air support for the airborne and seaborne landings. Four British and one French carrier borne aircraft were lost to anti-aircraft fire during *Musketeer*, and one British Sea Hawk was lost during a landing accident.<sup>80</sup> Although some shortcomings were apparent in equipment and training, and in particular the accuracy of ground attack missions was not what it should have been, Vice-Admiral Power considered that the only redeeming feature of the whole Suez affair was "*the brilliant performance of my carrier squadron which had exceeded all*

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<sup>78</sup>. ADM 116/6209. DEFE 7/1081. WO 288/77.

<sup>79</sup>. ADM 116/6209.

<sup>80</sup>. Dept. of Operational Research - Report No.34, *Carrier Operations in Support of Operation Musketeer*; in ADM 219/610.

*expectations*".<sup>81</sup> The aircraft carrier had proven its utility in limited war situations and this was something which the Admiralty were to become increasingly keen to emphasise as they sought to justify expenditure on a new generation of carriers.

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<sup>81</sup>. Memoirs of Admiral Sir Manley Power.

## CHAPTER SIX

### CHANGING PRIORITIES

In May 1955 Anthony Eden was re-elected Prime Minister. In the hope of cutting expenditure and easing the burden on the economy he initiated a defence review to build on the cost cutting work of the previous administration. In July the COS outlined their "*first thoughts*" on strategic factors affecting this review. They considered that defence policy must continue to cater for four priorities: to prevent global war short of sacrificing vital interests; to maintain and improve Britain's position in the cold war; to win any limited war should it break out; and to survive global war should it occur. They considered that global war was unlikely to occur except by accident or miscalculation. Global war, if it did occur, would be characterised by an early and intense nuclear exchange.<sup>1</sup> Eden endorsed these priorities. In 1956 he explained to the Cabinet Defence Committee:

The provision of this [nuclear] deterrent must have first call on our resources. Second priority must be given to maintaining adequate forces to carry out our world-wide commitments and to prevent small-scale hostilities developing into major wars. Lowest priority should be given to the various means of waging a global war should the deterrent fail to prevent its outbreak.

The Prime Minister went so far as to question whether any effort at all should be devoted to the ability to wage global war.<sup>2</sup>

This posed a problem for the Royal Navy. Since the Second World War the Navy had based its primary rationale on the need to keep open the sea lanes in a future battle of the Atlantic. The emphasis had been on a large navy devoted mainly to anti-submarine forces and backed up by a large mobilisable fleet in reserve. The Navy's prized aircraft carriers were devoted to global war contingencies. The 1SL, Lord Mountbatten, had anticipated that changes would have to be made. In 1955 he established the "*Way Ahead Committee*" to carry out an "*Enquiry into the structure and supporting organisation of the Naval Service*". The Way Ahead Committee undertook a thorough

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<sup>1</sup>. COS (55) 176, 25 July 1955, memo by COS; DEFE 5/59.

<sup>2</sup>. D (57) mtg, 31 July 1957; CAB 131/18.

examination of the whole future and organisation of the Royal Navy. Its earlier findings were reflected in the 1956 Navy Estimates. The Reserve Fleet, static and thus vulnerable to nuclear attack, was ruthlessly cut back. A review of afloat support was underway and the conversion of the small carriers *Triumph* and *Perseus* into a repair ship and a submarine depot was announced.<sup>3</sup>

On 7 June 1956 the COS re-stated the defence priorities. Global war received the lowest priority, whilst forces for limited and cold war were to be built up. The Admiralty were well aware that under these priorities forces devoted primarily to global war would be ruthlessly reduced and that this would point to a Navy whose first call was no longer to guard the sea lanes in war. In a Board meeting on 7 June 1956 the VCNS, Admiral W.W.Davis, outlined changes that would be necessary to secure the future of the fleet. Many members of the Board expressed concern at a proposed run-down of anti-submarine resources in favour of greater cold and limited war capabilities. According to the minutes:

In particular, they feared that the curtailment of anti-submarine and minesweeping efforts involved would be tantamount to the abandonment of the Navy's traditional primary task of safeguarding the sea communications of the United Kingdom in a major war.<sup>4</sup>

The recommendations of the COS included giving the Navy greater responsibilities for limited and cold war and this was seen as a way of safeguarding the future of the fleet and providing a clear role for the Navy. In view of the pressing requirement for defence cuts, the Board reluctantly accepted the Chiefs' recommendations for future strategy. While still expressing doubts about reducing commitments devoted to global war, the Board concluded that:

assuming very heavy defence cuts were inevitable....they would endorse the approach recommended by the COS as likely to be the least damaging to naval interests of all the possible modifications of policy.<sup>5</sup>

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<sup>3</sup>. Grove, *Vanguard to Trident*, p.174. Explanatory Statement on the Navy Estimates, 1956-1957; Cmnd 9697.

<sup>4</sup>. Board Minute 5016; ADM 167/146.

<sup>5</sup>. Board Minute 5021; ADM 167/146.

The Admiralty submitted their concept of the *Future Role of the Navy* to the COS on 20 July. The paper acknowledged the new strategic priorities and announced that forces intended primarily for global war were to be reduced and the resources reallocated to cold and limited war duties. The forces to be reduced included 75 ships of the Reserve Fleet, the closure of the Joint Anti-Submarine School at Londonderry, and a reduction in the number of submarines in home waters. A small number of vessels intended for global war operations were deleted from the new construction programme, including 50 minor landing craft. In place of these forces a new commando carrier would be added to the fleet, along with four destroyers and three frigates. Aircraft carrier resources were to be reorganised so that a light fleet carrier could be deployed in the East. The paper announced that:

The Navy's task in the Cold and Limited War is broadly to protect British interests, support the civil power, produce a rapid show of force in an emergency and uphold prestige and influence. This task grows no lighter and without an adequate Navy we would be greatly, if not irreparably, weakened as a World Power.

For this purpose it was proposed to establish a task group based on Singapore, capable of launching air attacks against targets ashore and of landing a self-supporting Royal Marine Commando. This task group would consist of a light fleet carrier, the new commando carrier, a cruiser and four destroyers.<sup>6</sup>

In January 1957 the new Prime Minister, Harold Macmillan, appointed Duncan Sandys as Minister of Defence. Macmillan himself had occupied this post between October 1954 and April 1955. In his brief tenure he had shown a determination to match commitments to resources. He pursued the same policy as Prime Minister, removing the existing Minister of Defence, Anthony Head, when he would not agree to drastic defence cuts.<sup>7</sup> This was unfortunate for the Navy. Head had been an officer in COHQ during the War and in 1946 he had given a lecture on the value of amphibious forces to the Royal United Services Institute.<sup>8</sup> As such it is likely that he would have been

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6. COS (56) 280, *The Future Role of the Navy*, 20 July 1956, memo by Admiralty; DEFE 5/70

7. Alistair Horne, *Macmillan 1957-1986. Volume Two of the Official Biography*, (London: Macmillan, 1989) p.45-48.

8. Brigadier A.H.Head, "Amphibious Operation" in *RUSI Journal*, Feb-Nov 1946, p.485-494.



receptive to the Admiralty's future plans. The appointment of Sandys threatened to be a bad one for the Navy. As Minister of Supply Sandys had led the fight against the Navy's aircraft carriers during the Radical Review of defence policy in the early 1950s. He had adopted an anti-Admiralty stance during the Radical Review, believing that strategic bombers and air defence fighters should have the highest priority and that land based aircraft could take over many naval roles. On appointment as Minister of Defence, Sandys made it clear that he was not convinced of the value of the Navy's carriers. He was an abrasive personality who was not afraid to tackle the COS head on and who was well suited to the task of forcing through defence cuts. With the full support of Macmillan, he was a formidable minister and it is fortunate that in Mountbatten the Navy had an equally formidable1SL.<sup>9</sup>

The Navy had invested substantial capital in its carrier force. Two large fleet carriers (*Eagle* and *Ark Royal*) and three light fleet carrier (*Albion*, *Bulwark* and *Centaur*) had been completed during the last decade. A fourth, slightly larger, light fleet carrier (*Hermes*) was approaching completion. The fleet carrier HMS *Victorious* was undergoing an extensive modernisation, while the light fleet carrier *Warrior* had completed a more limited modernisation.<sup>10</sup> The limited war role offered the Admiralty one way of protecting these ships. By emphasising the role of carriers as mobile air bases for use in limited war, and by abandoning the recently adopted nuclear strike role, Mountbatten successfully overcame Sandys opposition to carriers.<sup>11</sup>

The 1957 Defence White Paper was a reflection of Macmillan's desire to match commitments to resources. The reliance on large conventional forces and on peacetime conscription was abandoned. In its place came a smaller, all regular force. National Service was abolished, phasing out until 1962. Both the Army and Navy were reduced. BAOR was to be cut from 77,000 to 64,000 men and the Second Tactical Air Force in Germany was to lose about half its aircraft. Worse was to come for the RAF. The White Paper

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<sup>9</sup>. Geoffrey Till, "Admiral Earl Mountbatten of Burma" in Malcolm Murfett (ed.), *The First Sea Lords: From Fisher to Mountbatten*, (Westport: Praeger, 1995) p.265-282. David Brown, "Mountbatten as First Sea Lord" in *RUSI Journal*, June 1986 p.63-68. Grove, *Vanguard to Trident*, p.92 + 197-199.

<sup>10</sup>. Grove, *Vanguard to Trident*, p.199.

<sup>11</sup>. Ibid. p.199-209.

announced that manned fighter aircraft were eventually to be replaced by ground-to-air missiles and that light bomber forces based in Britain would be reduced. These cuts were counterbalanced by increased reliance on nuclear weapons to deter war in Europe and on increased strategic mobility to meet limited war and cold war needs. The build up of a substantial fleet of transport aircraft was announced. However, the existence of a political barrier of hostile countries in the Middle East threatened to prevent the overflight of certain countries by British military aircraft, reducing the mobility of an air transported central reserve.<sup>12</sup>

The 1957 Defence White Paper reflected the changed role of the fleet. While the role of the Navy in global war was declared to be "*somewhat uncertain*" its role in limited and cold war was stressed. The White Paper announced that "*On account of its mobility, the Royal Navy together with the Royal Marines, provides another effective means of bringing power rapidly to bear in peacetime emergencies or limited hostilities*". It acknowledged the continued role of the aircraft carrier. The main elements of the fleet were to be based around a small number of aircraft carrier groups, with the number of other large ships in the fleet reduced to a minimum. One carrier group would normally be based east of Suez.<sup>13</sup> The Parliamentary and Financial Secretary of the Admiralty, Christopher Soames, explained the new concept to the House of Commons:

Our conception of the streamlined peacetime Navy of the future consists of a number of carrier task forces, each consisting of one carrier, armed with the most modern aircraft and weapons that we can procure, a cruiser, and a number of destroyers and frigates for protection both from the air and from the sea. These task forces will be deployed in the most advantageous manner round the world, but would, of course, be capable of concentrating at any given point should the need arise.<sup>14</sup>

The Defence Committee approved the new concept for the Navy in November 1957.<sup>15</sup> Naval manpower was set at 88,000. Previous studies had been based on the provision of 80,000 men. At a meeting

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<sup>12</sup>. Defence: Outline of Future Policy 1957; Cmnd.124

<sup>13</sup>. Ibid.

<sup>14</sup>. Parliamentary Debates (Hansard), Session 1956-57, Volume 570, columns 56-57.

<sup>15</sup>. D (57) 19 mtg, 18 November 1957; CAB 131/18.

held at Broadlands, the country home of Lord Mountbatten, the 1SL had secured the extra 8,000 men from Duncan Sandys in return for a concession on aircraft carrier air groups. Sandys envisaged three carrier task groups, two in the west and one east of Suez. As the carriers in the west were to be devoted to anti-submarine duties, he believed that they should be equipped predominantly with cheap anti-submarine aircraft. The Admiralty strongly favoured balanced air groups, and the First Lord, Lord Selkirk, argued in favour of these within the Defence Committee. With air groups devoted primarily towards ASW, the carriers west of Suez would be of limited value for reinforcing the carrier east of Suez for limited war duties. As Eric Grove points out, it is probable that Mountbatten realised that his concession would have little long term effect. With fixed wing ASW aircraft about to be replaced by helicopters, implementation of Sandys's proposals would be delayed until about 1960. By this time a new minister might be in office and the proposal could be reversed.<sup>16</sup>

As Mountbatten had anticipated, Harold Watkinson, the new Minister of Defence appointed in October 1959, was receptive to calls for balanced air groups. In December 1959 Watkinson secured agreement in the Defence Committee for a strength of 38 Sea Vixen fighters, enough to equip both carriers west of Suez with a full squadron.<sup>17</sup> A decision on strike aircraft was not reached until May 1961 when the Defence Committee approved Watkinson's recommendation of a front-line embarked strength of 41 Buccaneers. The new fighter/strike establishment stood at 79 aircraft, enough to fill three carriers to capacity except when both *Eagle* and *Ark Royal* were in commission. No air group was provided for the fourth carrier which would therefore not be available to reinforce the three operational ships. At least with the Buccaneer, which entered service in 1962, the Fleet Air Arm at last had a modern, sophisticated strike aircraft capable of matching its land based rivals. In order to provide for the increased fighter and strike complements, the carriers would carry reduced ASW and AEW complements.<sup>18</sup>

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<sup>16</sup> Grove, *Vanguard to Trident*, p.211. D (57) 10 mtg, 18 November 1957; CAB 131/18. D (57) 14 mtg, 31 December 1957; CAB 131/18.

<sup>17</sup> D (59) 42, 23 December 1959, memo by Minister of Defence; CAB 131/22. D (59) 13 mtg, 31 December 1959; CAB 131/21

<sup>18</sup> D (61) 28, 16 May 1961, memo by Minister of Defence, CAB 131/25. D (61) 8 mtg, 31 May 1961; CAB 131/25.

Deeply affected by what he considered the “*tragic failure*” of the Suez campaign, Watkinson believed that if Britain was ever to be faced with that type of operations again then it needed the capacity to act quickly and forcefully. Unlike Sandys, he was more interested in conventional forces than nuclear weaponry. Self consciously a businessman, Watkinson sought to introduce businesslike practice to the Ministry of Defence. He summed up his own approach as follows:

I was more interested in the need to achieve a reorganisation of Britain's conventional forces under firm businesslike central direction, coupled with a policy which would speed up their reaction time and create a mobile military force with a poised capacity to operate from land and sea bases. This seemed to me a more important priority in 1959 than overmuch argument about nuclear philosophical heresies of one kind or another.<sup>19</sup>

He demonstrated a resolve to work with the COS and not against them as had sometimes been the case with his predecessor. In particular he maintained a close and friendly working relationship with Mountbatten who became Chief of the Defence Staff (CDS) in 1959, although he considered that Mountbatten sometimes allowed his naval past to interfere with his impartiality as CDS. Watkinson was keen to foster inter-Service cooperation and to avoid strife and inefficiency. In particular he favoured the development of a joint Royal Navy/RAF aircraft as the replacement for the Sea Vixen and Hunter fighters. He was perhaps naive in his understanding of Service rivalry, writing, “*Once we could get an aircraft that was equally at home on land or at sea, the colour of the uniform that the pilot wore became much less important*”.<sup>20</sup> Watkinson was a firm supporter of Admiralty plans to increase amphibious capabilities, seeing them as a means of achieving his goal of an effective mobile military force.

The new emphasis on limited and cold war duties highlighted the need to replace the existing amphibious lift. The old, slow wartime lift was not well suited to a new concept emphasising flexibility and mobility. Suez had demonstrated its limitations. In any case the ships and craft were over ten years old and were becoming worn out. The problem of replacing the wartime lift had been a major concern of

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19. Harold Watkinson, *Turning Points. A Record of Our Times*, (Salisbury: Michael Russell, 1986) p.112.

20. Ibid. p.138-139.

COHQ/AWHQ since 1945. In July 1955 AWHQ submitted a detailed paper to the Admiralty outlining their recommendations for future amphibious shipping. The paper concluded that the troop carrier of the future would be the helicopter ship. The helicopter offered almost unlimited possibilities for ship-to-shore lift of troops, stores and light vehicles. Light fleet carriers of the *Triumph* class were identified as suitable for conversion to this role. The size of these ships meant that they could also be fitted out as headquarters ships. The conversion in the United States of the escort carrier *Thetis Bay* to a helicopter carrier was noted. AWHQ appreciated that sufficient helicopters were not yet available to commission a helicopter carrier with a squadron of helicopters. Instead they hoped that "Amphibious Warfare Development and Training" could be added to the task of an existing helicopter squadron.<sup>21</sup>

Operation *Musketeer* had disrupted the planned deployment of amphibious resources. In December 1956 the COS instructed the Principle Administrative Officers (PAO), in conjunction with the JPS and CAW, to undertake an immediate study into the short term requirement for the newly released craft.<sup>22</sup> The report was submitted on 4 January 1957.<sup>23</sup> The report, approved by the COS on 8 January, specified that the pre-*Musketeer* AW Squadron of two LSTs and two LCTs should be kept in commission, and that four LSTs and six LCTs should be refitted and then placed in reserve at Malta at 28 days notice. The one outstanding LCT was to revert to its training role in the United Kingdom. It was recommended that naval LSTs surplus to amphibious warfare requirements should be held on a care and maintenance basis until a decision on their future could be reached. In September 1956 the COS had decided that the Army should be responsible for its own maritime logistics. Consequently, a number of landing ships and craft were transferred from the Navy to be operated by the Ministry of Transport on behalf of the Army. In January 1957 there were 19 LSTs and 25 LCTs being operated in this role. These ships and craft were referred to as War Department (WD) LSTs and WD LCTs.<sup>24</sup>

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<sup>21</sup>. Folio 39; DEFE 2/1901.

<sup>22</sup>. COS (56) 129 mtg, 4 December 1956; DEFE 4/93.

<sup>23</sup>. PAO/P(57)2, 4 January 1957, report by the PAO given at annex to COS (57) 3 mtg, 8 January 1957; DEFE 4/94.

<sup>24</sup>. Ibid.

The COS instructed the JPS to prepare a report with CAW on long term requirements for amphibious assault lift and invited the PAO, in conjunction with CAW, to prepare a report on the Service resources needed to meet the short term logistic requirement. Once these had been completed the Shipping Resources Committee would be able to complete a study of all resources, including merchant shipping, that would be required.<sup>25</sup>

The PAO submitted their report in March and this was used by the Shipping Resources Committee as the basis for their wider report, submitted on 18 December 1957. The JPS report on long term requirements was postponed to a later date.<sup>26</sup> This study outlined proposals for the assault lift up to 1965. It was based on the requirement to launch an assault of two battalions in the eastern Mediterranean within 28 days. 1965 was chosen as the cut off date as it was considered that by this time the existing amphibious shipping would have completed its useful life. The report concluded that the most satisfactory means of carrying the assault personnel was in three LST(A) and an LST(3) with a third battalion carried in either a troopship or warships. This was accepted as the basis for further planning. The Admiralty was invited to undertake a technical examination, in consultation with CAW, of the problem of replacing the existing assault lift.<sup>27</sup>

The possibility of employing unused aircraft carriers as amphibious warfare ships had been the subject of sporadic interest in the early 1950s. AWHQ had been closely studying American developments, involving the conversion of old aircraft carriers to assault ships.<sup>28</sup> The operations at Port Said in 1957 helped to illustrate the potential of helicopter landed troops, although the decision to provide helicopter assault ships had been taken prior to the crisis. The Navy announced its intention to convert a light fleet carrier to carry a Royal Marine Commando, its transport and a squadron of troop-carrying helicopters

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25. Ibid.

26. PAO report given at annex to COS (57) 23 mtg, 22 March 1957; DEFE 4/96. SRC (57) 10, **Ships and Craft Required for the Amphibious Assault**, 18 December 1957, report by the Shipping Resources Committee given at annex to COS (58) 3 mtg, 9 January 1958; DEFE 4/103.

27. SRC (57) 10.

28. See chapter three.

in July 1956 under the new concept for the Navy.<sup>29</sup> It is significant that the announcement of the commando carrier decision coincided with the decision to cut 50 minor landing craft designed primarily for old style landings on the 1940s model from the New Construction Programme.

The Admiralty sought ministerial approval for the conversion, submitting it to the Defence Committee in July 1957 as part of their construction programme for the period 1958/9 to 1962/3. The Admiralty built a strong case in favour of the commando carrier, enlisting the support of both the Army and the RAF. The RAF had some doubts. The CAS was warned by his Director of Plans that, although the commando carrier would probably be of value, "*The suggestion that they should operate a squadron of troops carrying helicopters will be the Navy's first incursion into the air transport role.*"<sup>30</sup> It was not to be the last time that the Air Ministry considered that the Navy was encroaching on territory they considered their own. The Board of Admiralty itself was not unanimous in its support of this new ship. The VCNS, Admiral W.W.Davis, did not consider that it was worth paying off a gun armed cruiser in order to convert a carrier for use by the Marines.<sup>31</sup> Mountbatten was firmly in favour of the ship, calling it "*the most interesting development in amphibious warfare since the end of World War Two*".<sup>32</sup> He carried the Board with him and successfully sold the idea to Duncan Sandys during the visit of the latter to Broadlands in November 1957.<sup>33</sup>

On 8 January 1958 728 Commando Flight was formed at RN Air Station, Lee-on-Solent, as the nucleus of what was to become 848 Helicopter Squadron embarked in *Bulwark*. The Flight was initially equipped with four HAS Whirlwind Mk.22 helicopters. Trials with the Commando Brigade started in February and the helicopters took part in amphibious exercises and operations in Libya, Sardinia and Cyprus. Trials were conducted with helicopters carried and operated from an LST. The LST, which was equipped with workshops, was able to meet all the normal servicing demands of the aircraft.

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<sup>29</sup>. COS (56) 280.

<sup>30</sup>. Brief prepared for CAS for a COS mtg to discuss COS (56) 280; AIR 8/2135.

<sup>31</sup>. Ziegler, *Mountbatten*, p.548.

<sup>32</sup>. Ibid. p.548-549.

<sup>33</sup>. Ibid. p.553. Grove, *Vanguard to Trident*, p.211-212.

Embarkation and landing was carried out with the LST beached and by flying on to and off a Rhino Ferry secured to the bows of the ship anchored off shore. A total of ten helicopters could be accommodated in the tank-deck. In exercises the Commander-in-Chief's despatch vessel, HMS *Surprise*, was used as a small commando carrier in the raiding role. With a few alterations to the ship's deck layout, up to four S.55 Whirlwind helicopters were operated from this vessel.<sup>34</sup>

The Commando carrier offered the prospect of greatly increasing the strength and flexibility of British forces east of Suez. The operational concept of the ship was as follows:

HMS *Bulwark* is intended to support and maintain under operational conditions one Commando, though she could carry up to the equivalent of an additional Commando and a Brigade Headquarters in an emergency and depending on circumstances. The continued presence of the carrier in support of the Commando is normally envisaged, but under exceptional circumstances she could be withdrawn for a short period not exceeding 14 days.<sup>35</sup>

The carrier was intended to provide complete administrative support for one Commando for 14 days at intensive rates, and for 42 days at reduced rates. The Admiralty pointed out that steaming at 20 knots, the commando carrier force could reach any threatened spot in the Arabian Peninsula or Far East Station in less than 11 days from any UK administered territory in the area, provided that the carrier was operational with Commando embarked, or was lying at Singapore at 12 hours notice with the Commando disembarked. In global war the commando carrier would be assigned for NATO use in the anti-submarine role from D+30 and could theoretically convert to this role within its own resources.<sup>36</sup> In October 1958 the COS agreed that these Admiralty proposals were in accord with the approved defence policy.<sup>37</sup>

HMS *Bulwark* was expected to be capable of landing a Commando 35 miles distant in seven hours. Vehicles and stores would require 46

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<sup>34</sup>. AWHQ Information Letter No.9, 1958; copy at Royal Marines Museum (RMM), Eastney. COS (58) 283, 12 December 1958, report by CAW; DEFE 5/87. HMS *Surprise* was formerly a Bay class frigate, launched in 1945.

<sup>35</sup>. COS (58) 219, 18 September 1958, memo by Admiralty; DEFE 5/85.

<sup>36</sup>. Ibid.

<sup>37</sup>. COS (58) 87 mtg, 14 October 1958; in DEFE 4/112.



hours. The Whirlwind helicopters were unable to lift the standard quarter ton vehicles and thus until the more capable Wessex helicopter could be introduced 30 light Citroen 2CVs were to be embarked. These vehicles had dubious off road mobility and their value as military vehicles capable of cross-country travel was doubtful. They were, nevertheless, better than nothing. Once the Whirlwind helicopters had been replaced by the Wessex it was anticipated that *Bulwark* would be able to land a Commando at 60 miles in six hours, completing the build-up in 33 hours.<sup>38</sup>

In January 1959 work commenced on the conversion of HMS *Bulwark* in Portsmouth Dockyard. Over the next twelve months the ships fixed wing capability was removed, as the aircraft carrier became a commando carrier. Catapults and arrestor wires were taken out. Eight 40mm anti-aircraft guns were replaced to provide space for four LCA(2)s to be carried on gantries. Operations Room facilities were modified, providing command facilities for the embarked military force. Extensive air-conditioning was fitted, important given the ships likely area of operations. The initial complement of 16 Whirlwind helicopters was to be replaced by a larger, more capable complement of Wessex helicopters when these became available. *Bulwark* commissioned on 19 January 1960 under the command of Captain R.D.Franks, a former Commodore AW Squadron. 848 Squadron embarked on 10 March followed on 14 March by 42 Commando with a Naval Gunfire Support Forward Observer Party and an Air Control Team attached, along with a full complement of vehicles, 2CVs included.

Operational trials were conducted in North Africa. The first large exercise carried out was "*Sky Pioneer*" conducted in conjunction with the AW Squadron and 3 Commando Brigade off the coast of Libya in April 1960. 42 Commando was landed by helicopter to "*capture oil fields*" while 40 Commando was landed in the conventional manner by the AW Squadron. The helicopter landing was successful, but the Whirlwinds demonstrated the limitations of their payload. This was exacerbated by the high temperature and humidity which reduced performance. In practice it proved impractical for *Bulwark's* helicopters to operate in their secondary role of anti-submarine

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<sup>38</sup>. AWHQ Information Letter No.9, 1958; RMM. COS (58) 219.

warfare. Captain Franks described this role as “*very tenuous*” due to the lack of trained personnel. However, exercises were successfully conducted with specialist anti-submarine squadrons embarked.<sup>39</sup> The problem of landing 3-ton vehicles from the carrier brought investigations into the use of light aluminium LCMs similar to craft built for the RAF. The idea was dropped due to the prohibitive cost and the time it would take to implement.<sup>40</sup>

The decision to convert *Bulwark* to a commando carrier did not entirely solve the problem of replacing obsolete ships and craft. *Bulwark* could only embark one Commando, or at most two Commandos for limited periods. The ship had only a limited ability to land vehicles and support weapons without harbour facilities and no ability to land armour in the assault. If amphibious landings were to take place against organised opposition possessing heavy weapons and/or armour, then more conventional amphibious shipping would still be required. Unless the helicopter landed Commando could guarantee to capture a harbour or an airfield in the early stages of an operation then the ability to land supplies and reinforcements over the beach would remain important. In many respects, the commando carrier could only offer the same kind of assault capability as an airborne landing, that of lightly equipped infantry.

Requested in January, and submitted in November 1958, the Technical Examination by an Admiralty Assault Study Group reflected the changing priorities of British defence. The examination was based on the premise that there was no requirement for seaborne assault forces solely for global war purposes. The rationale for amphibious forces was now that they would be used for internal security and limited war purposes. This meant that the ships and craft had to exist and be in place ready for the call to action. The changing concept of amphibious warfare required a new approach to equipment. It was no longer enough to prepare designs and leave construction until after the outbreak of war. With interests and responsibilities in the

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39. R.D.F.[R.D.Franks], “The Commando Carrier’s First Commission” in *Naval Review*, Volume 49, 1961 p.359-364. Interview with Captain R.D.Franks, conducted at Dartmouth on 8 May 1996. Desmond Wettern, *The Decline of British Seapower*, (London: Jane’s Publishing Co.Ltd, 1982) p.151.

40. Ken Burns + Mike Critchley, *HMS Bulwark 1948-1984*, (Likeseard, Cornwall: Maritime Books, 1986) p.29-31. AWHQ Information Letter No.11, 1960; RMM. COS (59) 32, 9 February 1059; DEFE 5/88.

Mediterranean, Persian Gulf and the Indian Ocean, long ocean passages of 2,000 to 3,000 miles could be expected. Speed of execution of an assault was likely to be of paramount importance. Old fashioned short legged craft capable of less than 10 knots would clearly not be able to fill future requirements. It was considered that the commando carrier would be capable of dealing with any requirement for opposed landings during internal security operations. The largest military formation likely to be made available for amphibious assault operations in limited war was the brigade group consisting of a brigade headquarters and two battalion groups supported by two squadrons of armour and two field batteries. Amphibiously landed troops had to be prepared to operate in conjunction with airborne forces. It was therefore considered that assault ships should be capable of landing all the elements of a standard brigade group in suitable proportions.<sup>41</sup>

The report considered five possible types of ship:

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|--|---|
| 1. A new LCT.  | LCT(9)  |
| 2. Bow loading LST                                     | To be capable of beaching on a gradient of 1 in 120 and lifting half a battalion group. |
| 3. Stern loading LST                                   | To have the same characteristics as the bow-loader without the beaching requirement.    |
| 4. Amphibious transport dock                           | Similar to the wartime LSD.   |
| 5. Current or projected United States ships and craft. |   |

Based on existing sketch designs of the LCT(9), it was estimated that an LCT would have a speed of only 12 knots and an ocean-going capability below that required. A relatively small vessel, the LCT would be unable to carry personnel other than vehicle crews and so additional personnel lift would be required. As designed, the LCT(9) could carry 60 men and six tanks or 13 three ton vehicles.

Like the LCT, the bow-loading LST was essentially just an improvement on existing designs. The ability to land vehicles on beaches with a gradient of 1 in 120 would be a great improvement on the LST(A) which required a beach of 1 in 47 but was worse than the LCT(8) which could manage a 1 in 150 beach. On steep beaches the LST would still require the assistance of pontoon causeways. If

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<sup>41</sup>. COS (58) 254, **Technical Examination of the Problem of Replacement of the Assault Lift**, 13 November 1958, report by Admiralty; DEFE 5.86.

armour was required in the early stages of the assault and it proved imprudent to beach a ship the size of an LST before the beach was secured, DD tanks would be necessary. As with all LSTs, shallow draught and the hull form would restrict performance and the vessel would be unlikely to exceed 16 knots sustained speed in fair weather (Figure One).

The stern loading LST offered improved seakeeping and speed but sacrificed the ability to land vehicles directly on the shore. Infantry and light vehicles could be ferried ashore in landing craft or amphibians or by helicopters landed on the ship's deck. However, heavy vehicles could only be landed by Rhino ferry. To land tanks in the assault would require DD equipment. Unloading by ferry would impose considerable delay, with equipment arriving in small packets. In all but calm weather ferrying of any sort, other than by helicopter, was liable to be impossible. The study group therefore rejected the stern loading LST concept (Figure Two).

The Amphibious Transport Dock (ATD) combined the virtues of good speed with the ability to land heavy equipment and tanks with its LCUs and large LCMs. The large American LPD was considered too big for British uses and represented a case of putting "*too many eggs in one basket*". For British purposes a smaller ATD, capable of carrying two-thirds of a battalion group plus 12 tanks, was envisaged. This ship would have a passage speed of 23 knots and carry six LCM in her well. DD tanks would still be desirable as the LCM proposed only had a lift of 20 tons. If DD equipment could not be made available then some of the LCMs could be replaced by large craft. The delays inherent in the ferry system of discharge would affect the ATD, but to a lesser extent than in the stern-loading LST as the ATD could load two LCMs simultaneously. The shelter of the stern well would reduce the effect of weather (Figure Three).

The option of procuring American ships or craft was not considered desirable as USN ships were generally larger than was considered suitable for British requirements. That such ships might come with diplomatic strings attached did not escape the authors of the report. The report noted that not even the Americans attempted to lift entire brigade groups by ATD. It concluded that the choice appeared to lie between the bow-loading LST and the ATD. Although bow-loading

LSTs offered the best military solution to the problem of lifting and landing the assault echelon of a brigade group, their slow speed prejudiced the ability to operate in conjunction with the commando carrier and would place the British at a disadvantage when working with the Americans. The USN concept of operations was to have a fast element of helicopter carrying LPHs supported by fast LPDs, with a slower element of LSTs following behind.<sup>42</sup>

One month after the Admiralty Technical Examination, the Shipping Resources Committee submitted their report on the replacement of LSTs and LCTs for the logistic lift.<sup>43</sup> It was assumed that the prime role of such shipping was to provide a follow up for an amphibious assault. They would be required to lift all conventional armour, equipment and supporting weapons required in the early stages of an operation, although not in the assault. In line with the assumptions of the Admiralty examination, the ships would be required to have good speed and endurance in order to be able to undertake a 2,000 to 3,000 mile ocean passage, and they would have to be able to land all elements of a brigade group over beaches. The emphasis could be placed more on landing capability than was the case with the assault lift. Inevitably, some time would elapse before civilian manned vessels could follow on the assault so the requirement to keep pace with the assaulting ships was not absolute. The vehicle to man ratio of follow on echelons was higher than for assaulting forces. It would be important to have good unloading capabilities if difficult and bulky equipment was to be discharged without port facilities. Unlike Royal Navy shipping these support ships would be required to conform with statutory regulations governing construction and operation of Merchant Navy vessels. They would also be required to perform a useful transport role in peacetime. Thus any new ships would require a robust hull and machinery capable of sustained peacetime operation, making for a much heavier ship than a comparable assault vessel.

The Committee considered three possible alternative: a stern loader; a landing ship dock; and a bow-loading LST. The stern loader was rejected for much the same reasons as it was rejected for the assault role. Despite offering better speed and seakeeping than a bow-loading

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<sup>42</sup>. Ibid.

<sup>43</sup>. COS (58) 296, 31 December 1958, report by the SRC; DEFE 5/87. COS (59) 1 mtg, 1 January 1959; DEFE 4/115.

LST, problems associated with discharging its load were deemed to rule it out. Similarly, for purposes of the follow-up, the dock ship was considered unsuitable. The Committee considered that its size might restrict its ability to operate from small harbours and that this, and the highly specialised nature of its design, would make it uneconomical to operate in peacetime. There was also the possibility that there would be some difficulty in a dock ship conforming with statutory safety regulations. The favoured alternative was the bow-loading LST.

The key advantage of this LST was the ability to land cargo directly onto the shore, and its shallow draught which would facilitate operating in small harbours. As with existing LSTs, draught and hull form would restrict speed and seaworthiness but it was hoped to be able to achieve a ship capable of 16 to 17 knots in calm weather. The assault requirement to be able to land forces on a beach gradient of 1 in 120 was, however, well outside the range of a Merchant Navy vessel. It was considered unlikely that the performance of existing LSTs (about 1 in 40) could be bettered and therefore pontoon causeways would be needed for landings on flat beaches. The new LST would have a stern door for peacetime loading and unloading and for wartime use when harbour facilities were available. The report was approved by the COS, and the Shipping Resources Committee was instructed to progress design studies for a new bow and stern loading LST.<sup>44</sup>

In May 1959 the JPS submitted the report first requested in January 1957, the *"Long Term Study of Amphibious Operations"*. The report studied the alternative methods of providing a long term capability of putting ashore in the assault a brigade headquarters, three battalions or Commandos, two squadrons of tanks and two field batteries. It was assumed that the Middle East air/sea barrier would remain but that Britain would retain main base facilities both sides of this barrier. The report confirmed that sea lift would still be required to land a balanced military force:

The speed and flexibility required of forces in cold and limited war situations place increasing emphasis on airborne capacity, and on the carrier borne helicopter force which is the latest amphibious development. In

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<sup>44</sup>. COS (59) 1 mtg.

the foreseeable future, however, neither aircraft nor helicopters will be available to lift the heavier types of operational equipment, and in any case the number which they can lift would always be limited. Such lack of organic heavy support would place airborne and helicopter forces at a disadvantage against an enemy established in prepared positions and/or supported by AFVs. At the same time we do not foresee a requirement for amphibious assault against a heavily defended coastline.

The JPS considered that tactical nuclear weapons might one day replace heavy support weapons but that in the type of operations contemplated for the assault lift political considerations would rule out their use. As one could not count on the early use of either an airfield or port facilities it was important to retain the ship's ability to land over a beach or in a port using their own facilities.<sup>45</sup>

Taking account of the Admiralty Technical Examination and the Shipping Resources Committee report on the logistic lift, the JPS considered four main types of ship for a future amphibious lift. For the assault they considered the commando carrier, the ATD and the LST(A). For the follow up they considered the WD LST. The operational concept was for a landing within 28 days of notice in order to capture a port or airfield within seven days of the assault. The beach landings would be made within 20 miles of a port and no operations would be conducted further than 40 miles from the beach until a port was taken. The follow up support was to land between 24 and 48 hours after the assault, depending on the scale of opposition. Supplies for seven days would be landed with the assault and follow up. An all Royal Navy assault and follow up lift was considered and rejected as too expensive in both capital and manpower. Two cases were considered: case A - *Bulwark* supported by ATDs and; case B - *Bulwark* and another commando carrier supported by a reduced number of ATDs. In either case nine WD LSTs would have to be prepositioned on both sides of the Suez barrier in order to meet the 28 days deadline, see Table One.

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<sup>45</sup>. JP (58) 24, 11 May 1959, report by the JPS given at annex to COS (59) 32 mtg, 26 May 1959; DEFE 4/118.

**Table One: Long Term Study of Amphibious Operations**

	CASE A	CASE B
<b>Royal Navy Ships</b>		
commando carrier	1	2
ATD	3 small or 2 large	2 small
<b>WD Ships</b>		
WD LST	18	18
<b>Manpower</b>		
Royal Navy	900*	1390/1690*
War Department	1170	1170
<b>Capital cost</b>	£42.9M*	£44.3M*

\* excluding manpower/expenditure for HMS *Bulwark* which had already been allowed for.

Under case B, while the helicopter lift would provide added tactical flexibility, the use of smaller ATDs would cause a shortfall of 4 Centurion tanks and 26 3-ton trucks, all of which would have to be carried by the follow up lift. This would bring an overall shortage of 20 3-ton trucks. On the other hand, case B had the advantage of providing one commando carrier with one ATD and nine WD LSTs either side of the barrier. This would fulfil the requirements for balanced forces available at short notice in cases where speed was of the overriding importance. It also had the advantage that a second commando carrier could be converted more quickly than an ATD could be built. To remove the shortfall of vehicles associated with the small ATD, a design larger than that recommended by the Admiralty Technical Examination would be needed. This could raise the cost of the ATD from an estimated £5.3 million to about £6.7 million, the cost of a commando carrier with its helicopters. The JPS considered that case B was the better solution *“as it meets the limited war requirement while permitting a better deployment of forces for cold war tasks”*.

The JPS also considered possible alternatives that would offer a reduced amphibious capability, either by dropping the necessity to assault within 28 days or by dropping the requirement to assault at brigade group strength. In order to land a force rapidly but at less than brigade group strength, the JPS examined cases C,D,E, and F, see Table Two.



**Table Two: Long Term Study of Amphibious Operations**

<b>CASE</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Royal Navy Ships</b>				
commando carrier	1	2	1	2
ATD	3 small or 2 large	2 small	-	-
LST(A)	-	-	5	4
<b>WS Ships</b>				
WD LST	9	9	9	9
<b>Manpower</b>				
Royal Navy*	900	1390/1690	550	1230/1530
War Dept.+	585	585	585	585
<b>Capital cost*</b>	£29.4M	£30.8M	£29M	£32.6M

\* excluding the manpower/expenditure for HMS *Bulwark*  
+ civilian crews.

The JPS preferred case C and D as these did not rely on LST(A), which could only land DD armour in the assault. Of cases C and D, case D was favoured as in this case, for operations at short notice, one commando carrier, one ATD and four or five WD LSTs could be deployed on either side of the barrier. They could lift a balanced force for the assault but with reduced follow up compared to case B. Cases G and H covered the reduced requirement to land a force of less than brigade strength, no matter what the time scale. Case G catered for a force of one commando carrier, two small ATDs and nine WD LSTs. Only the assault element of one helicopter landed Commando and one beach landed battalion group could be deployed world wide within 28 days. A brigade group could be built-up within 38 days. With two commando carriers, one small ATD and nine WD LSTs under case H, two Commandos could be landed by helicopter and one battalion could be beach landed, with reduced supporting arms, within 28 days. As with case G a brigade group could be built up within 38 days. For purposes of an amphibious assault over the beaches, case G was preferable to H, although for other tasks such as cold war operations not requiring an assault landing, case H had considerable advantages. In all of the cases outlined by the JPS there would be an additional manpower requirement over the existing allocation of 520 men to the AW Squadron.

The report received a mixed reaction from the Services. The Air Ministry considered that small lightly equipped forces that could be rapidly deployed would be of more use than larger more balanced forces. They were thus against the provision of brigade group lift, preferring instead a two battalion lift. Such small lightly armed

## Chapter Six: Table Three

### Long Term Study of Amphibious Operations

		<b>£ million</b>
<b>Case C</b>	2 commando carriers .	
	plus 4 ATD	30.93
	9 LST	13.5
	DD equipment	0.65
		<b>45.07</b>
<b>Case D</b>	3 commando carriers	
	plus 3 ATD	34.44
	9 LST	13.5
	DD equipment	0.64
		<b>48.58</b>
<b>Case C+</b>	1 commando carrier	
	plus 3 ATD	20.42
	9 LST	13.5
	DD equipment	0.64
		<b>34.56</b>
<b>Case D+</b>	2 commando carriers .	
	plus 2 ATD	17.11
	9 LST	13.5
	DD equipment	0.65
		<b>31.25</b>

### Annual maintenance cost

Case C	£1.71 million
Case D	£3.08 million
Case C+	£0.56 million
Case D+	£0.62 million

### Additional RN manpower required by 1965

Case C	1900
Case D	2600
Case C+	1125
Case D+	850

battalions could, of course, also be air lifted. The RAF was aware that the Army favoured the brigade group. CAS Dermot Boyle was briefed by his subordinates that case H was the best choice in view of likely national needs.<sup>46</sup> Nevertheless, in discussion on 26 May the COS decided that cases C and D should be accepted as suitable hypothetical bases on which to carry out detailed costings. It was further decided that detailed studies should be started on the ATD and the WD LST and that HMS *Albion*, sister to *Bulwark*, should be earmarked for possible conversion to commando carrier. No firm decision was taken on the size and composition of the amphibious lift.<sup>47</sup>

Detailed costings of both cases C and D were completed in November 1959. In order to maintain the required number of ships in service for each of these cases additional ships would have to be maintained in operational reserve. Thus the full requirement for case C was for two commando carriers, four ATD and nine LST at a cost of £45.07 million. Similarly, case D required three commando carriers, three ATD and nine LST at a cost of £48.58 million. As an alternative to this expense, the Admiralty prepared cases C+ and D+. Case C+ provided for one commando carrier and one ATD in commission with two ATDs in operational reserve. Case D+ catered for one commando carrier and one ATD in commission and one of each in reserve, see Table Three.<sup>48</sup>

In December 1959 the Minister of Defence, Harold Watkinson, submitted the new Naval Construction Programme to the Defence Committee. Admiralty Long Term Costings catered for an amphibious force based upon case D+, two commando carriers and two assault ships, one of each type in commission and one each in operational reserve. The first assault ship was planned to complete in 1964. Watkinson, a keen advocate of amphibious capabilities, informed his colleagues that:

I believe that we should aim at a better amphibious capability more quickly than under the Admiralty plan. I am sure this will be one of the needs of the future.<sup>49</sup>

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<sup>46</sup>. AIR 8/2245.

<sup>47</sup>. COS (59) 32 mtg.

<sup>48</sup>. Folio 240; DEFE 11/220.

<sup>49</sup>. D (59) 40, 22 December 1959, memo by Minister of Defence; CAB 131/22.

Consequently, the Admiralty was examining ways in which the assault ship might be constructed more quickly. They were also looking into the implications of keeping all four ships in the active fleet.<sup>50</sup>

In April 1960 the First Lord, Lord Carrington, reported to Watkinson the plans for improving amphibious capabilities beyond those contained in the 1959/60 Costings. HMS *Albion* was to be taken in hand for conversion to commando carrier in June 1961, completing in December 1962. The ship would then be placed in operational reserve with a reserve air group of 16 Wessex helicopters aboard. The first Assault Ship would be ordered in September 1961, completing in March 1964. Allowing for a trials period, this would allow it to replace the existing AW Squadron in late 1964. A second Assault Ship was to be ordered in September 1962. With a completion date of March 1965 this ship would go into operational reserve. Carrington pointed out that neither ship in reserve could be manned and moved to an area east of Suez in under two or three months. The programme for the commando carrier could be speeded up by taking *Albion* in hand at Portsmouth Dockyard in February instead of December 1962.<sup>51</sup> Watkinson approved the Admiralty plan to begin work on *Albion* in February 1962 and the Treasury gave approval for £310,000 in order to conduct detailed planning work and the order of equipment with especially long lead times.<sup>52</sup>

The Ministry of Transport design study for the WD LST, ordered by the COS in December 1958, was submitted for approval in May 1960. The new design was prepared in consultation with the Admiralty and in accordance with a War Office staff requirement. The new LST was to have a maximum speed of 17 knots and an economic speed of 15 knots. It would have space for 350 troops and the ability to discharge a load of 10 tanks or 500 tons of stores on a beach gradient of 1 in 50. On more favourable beach gradients or when employed in the transport role the ship would be able to carry 1480 tons of stores or 16 tanks. In all respects the design was an improvement on existing British LSTs. Amongst the new features incorporated was a

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<sup>50</sup>. Ibid. COS (60) 1, 1 January 1960, report by CAW; DEFE 5/99. COS (60) 18 mtg, 15 March 1961; DEFE 4/125

<sup>51</sup>. Folio 3; DEFE 7/1677.

<sup>52</sup>. Folios 10 + 10; DEFE 7/1677.

ramped stern opening to permit the vessel to be loaded or unloaded at a quay on the roll-on roll-off principle. Provision was made for the carriage of a helicopter without prejudice to cargo carrying ability and the superstructure and deck was designed to facilitate discharge by helicopter. A pontoon causeway could be carried in an elevated position without interfering with vehicle carriage.<sup>53</sup>

The Shipping Resources Committee recommended that in order to ensure timely replacement of existing ships, construction of the first new LST should begin by January 1961 at the latest. The COS approved the new design and authorised the development and building of the first ship. The Ministry of Transport was invited to arrange for a commercial shipping company to supervise the development and construction of the first ship, and to operate it once completed.<sup>54</sup>

Watkinson continued to press his Cabinet colleagues for approval to build the new assault ships. He reported on design for the new ship to the Defence Committee, concluding that "*the new ship's qualities of speed, seakeeping and endurance will transform the effectiveness of our amphibious capabilities*" .<sup>55</sup> The normal capacity of this ship would be 15 tanks, 30 three ton vehicles and six field guns with accommodation for 350 men. If circumstances required the ship would be able to carry an additional 350 men. Alternately it could be used to hold a stockpile offshore for troops operating on land. Watkinson noted that provision had been made in current plans and estimates to order the ship in 1960 at an estimated cost of £10 million, including ancillary craft and stores.<sup>56</sup>

Watkinson also pushed to have both commando carriers in commission so that at least one ship would always be available. Such a decision would increase annual running costs by about £2 million and would require expenditure of £3.5 million on additional helicopters. The COS backed these proposals, recognising the need to exploit the flexibility of these ships. In view of the time that would be needed to crew and work up a commando carrier held in reserve such a ship could only be regarded as a pre-planned replacement for its sister.

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<sup>53</sup>. COS (60) 151, 31 May 1961, report by the SRC; DEFE 5/103.

<sup>54</sup>. COS (60) 36 mtg, 26 May 1960; DEFE 4/127.

<sup>55</sup>. D (60) 54, 2 December 1960, memo by the Minister of Defence; CAB 131/24.

<sup>56</sup>. Ibid.

The ship could not be made available rapidly in an emergency and its commissioning would require the paying off of other ships. An accident aboard the operational ship could therefore mean that there was no active commando carrier available for a period. If it was decided to commission both commando carriers, naval manpower would have to be increased by some 1250 men.<sup>57</sup>

On 7 December 1960 the Defence Committee discussed the feasibility of commissioning *Albion*.<sup>58</sup> The possibility of maintaining one ship in commission either side of the barrier was raised and subsequently the question was investigated by Watkinson and Chancellor of the Exchequer, Selwyn Lloyd. The proposal was now that the two ships would rotate between east and west of Suez. One ship would be constantly available fully worked up east of Suez. The other ship would be available over one third of the time for duty west of Suez or in order to reinforce the eastern fleet. Under these measures, running costs were slightly reduced to £1.6 million in 1964/5. Two Commandos would be stationed east of Suez to operate with the commando carrier, with the remaining three west of Suez.<sup>59</sup> Selwyn Lloyd accepted the need to maintain both commando carriers along the lines outlined by Watkinson. He also agreed that the Seaborne Support Ship (Assault Ship) should go ahead.<sup>60</sup>

One factor which swayed the Treasury towards accepting the commissioning of both commando carriers and construction of the assault ship was the difficulty the Army was having in meeting its recruitment targets.<sup>61</sup> On 25 January 1961 Watkinson reported to Selwyn Lloyd that:

with the disastrous outlook for Army recruitment I really cannot defend the Government in what may be a major political crisis if I do not have some help with extra mobility and manpower where we can get it.

He went on to add that:

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<sup>57</sup>. Ibid.

<sup>58</sup>. D (60) 12 mtg, 7 December 1960; CAB 131/23.

<sup>59</sup>. D (61) 8, 20 January 1961, memo by the Minister of Defence; CAB 131/25.

<sup>60</sup>. D (61) 17, 20 February 1961, memo by the Chancellor of the Exchequer; CAB 131/25. DEFE 7/1678.

<sup>61</sup>. D (61) 17.

The whole purpose of the *Albion* and support [i.e. assault] ship operation is not primarily because the Admiralty want it. Indeed, I am sure that they would not give it over-riding priority. I must have it to plug what may be a serious gap in our military strength and dispositions.<sup>62</sup>

The Minister was aware of the dangers of linking, in particular, the commissioning of the second commando carrier to the Army's recruitment trouble. Such linkage would not only cause offence to the Army, it would also open up a route for the Treasury to attack the requirement for *Albion* once Army recruitment picked up.<sup>63</sup>

The plan to build a new assault ship to replace the AW Squadron was announced in the 1961 Navy Estimates.<sup>64</sup> The design for this ship was approved by the Board of Admiralty in March 1961. The ship was to be 12,100 tons deep displacement with a trials speed of 21 knots, provided by a two shaft steam turbine machinery. It would have accommodation for 700 men and could carry 15 tanks, six self-propelled guns, 50 loaded three ton trucks and ninety tons of stores. The ship could carry four LCA(2) at davits and embark four LCM(9) in a stern well. By flooding the stern well, loaded LCM(9) would float out through a stern gate in the same manner as with the wartime LSD. Space would be provided on the after-end of the weatherdeck for the operation of a Wessex helicopter. The ship would be fitted out as a Naval Assault Group/Brigade Headquarters ship. The only armament provided was four Seacat launchers with eight missiles each and two Bofors guns. The Board directed that for any future assault ships, consideration should be given to fitting a 4.5 inch turret in order to provide some self-defence capability against surface attack. The estimated cost of this vessel was £8,750,000 excluding the cost of craft, stores, ammunition, fuel etc.<sup>65</sup>

The contract for this ship, dubbed Landing Ship Assault, was placed with Harland and Wolff at Belfast in December 1961. It was hoped that the ship would be complete by mid-1965. Vosper got the contract to produce two prototype LCM(9). They were to be ready for evaluation in 1963, so that an order for the four LCM(9) could be

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<sup>62</sup>. Folio 4/2; DEFE 7/1678.

<sup>63</sup>. Folios 74-77; DEFE 7/1677.

<sup>64</sup>. **Explanatory Statement on the Navy Estimates 1961-1962**; Cmnd 1282.

<sup>65</sup>. Board Minute 5482; ADM 167/158. Memo B.1382; ADM 167/159.

placed in time for the craft to be ready at the same time as their mother ship.<sup>66</sup> The 1962 Navy Estimates noted that the first assault ship had been ordered and announced that a second would be ordered during that financial year.<sup>67</sup> The first assault ship, HMS *Fearless*, eventually entered service in 1965, followed in 1967 by its sister ship, *Intrepid*. Capable of carrying a balanced military force on an ocean passage in company with the commando carriers, these ships represented a considerable improvement on the old AW Squadron. Each ship had a flight deck with facilities for five Wessex helicopters. In the event, neither ship was fitted with a 4.5 inch gun. After 15 years of service with the Navy they were to display their worth by playing a central part in the successful amphibious landings of the Falklands War.<sup>68</sup>

It was not merely the AW Squadron that needed replacement. The WD LSTs were equally old and worn out.<sup>69</sup> In May 1960 the COS approved the initiation of a construction programme to replace these ships. The COS study, *British Strategy in the Sixties*, called for a fleet of six new LSTs, now known as Landing Ship, Logistic (LSL) with one operational and one reserve west of Suez and three operational and one in reserve east of Suez.<sup>70</sup> The contract for the first LSL went to the Fairfield Shipbuilding and Engineering Company, Govan in November 1961. As part of the contract the shipbuilders had to develop the final specification for the LSL.<sup>71</sup>

The new design was in every way an improvement on the old LSTs. With a sustained speed of 15 knots the LSL could travel 8,000 nautical miles. It had accommodation for 340 men and could carry 16 tanks or 1,390 tons of stores. It could land a tactical load of 10 tanks or 500 tons directly on to a beach gradient of 1 in 50.<sup>72</sup> To facilitate rapid turnaround at terminals, a number of new features were incorporated. It had twin internal ramps to facilitate movement

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<sup>66</sup>. COS (62) 81, 21 February 1962, report by CAW; DEFE 5/124.

<sup>67</sup>. **Explanatory Statement on the Navy Estimates 1992-1963**, Cmnd 1629.

<sup>68</sup>. COS 109/64, 2 April 1964; DEFE 5/150. **Conway's All the World's Fighting Ships, 1947-1982: Part Two The Western Powers**, (London: Conway Maritime Press, 1983) also see **Jane's Fighting Ships**.

<sup>69</sup>. COS (61) 195, 23 June 1961, report by the SRC; DEFE 5/114. COS (62) 47, 5 February 1962; DEFE 5/124.

<sup>70</sup>. COS (62) 47.

<sup>71</sup>. COS (62) 81, 21 February 1962, report by CAW; DEFE 5/124.

<sup>72</sup>. COS (62) 373, 12 September 1962, report by the SRC and PAO; DEFE 5/130.



between the main hold and upper deck. A ramped stern opening allowed the craft to be loaded at a quayside using the roll-on, roll-off principle. The superstructure and main deck were designed to facilitate discharge by helicopter, and provision was made for a helicopter to be carried at all times. A pontoon causeway could be carried in an elevated position without interfering with vehicle carriage.<sup>73</sup>

With only six LSL planned the introduction of these ships would not increase the total logistic lift as there would be less ships than at present available. However, their improved characteristics offered increased personnel lift and a quicker more flexible response to crises. Unlike the old WD LSTs, the LSLs would be able to supply the proper logistic support to the new amphibious groups based upon the commando carriers and assault ships. The COS were eager that the order for the first ship should be followed rapidly by orders for two more.<sup>74</sup> The Treasury were willing to approve an order for the second LSL, largely because of the parlous state of the shipbuilding industry. However, they were reluctant to agree to an order for the third ship until trials of the first had been completed. The COS proposed laying down both ships in April 1963, noting that they would be barely half built by the time the first LSL completed its trials. At this stage it should be possible to make any adjustments to subsidiary features that experience with the first ship might indicate. It was, after all, common practice to order batches of warships before the completion of the first.<sup>75</sup>

The Minister of Defence, now Peter Thorneycroft, went even further. In March 1963 he suggested that the fourth, fifth and sixth ships should be ordered immediately, to take advantage of the difficulties of the shipbuilding industry. The COS concluded that while there would be a definite military advantage in accelerating the orders there was no urgent need to do so on operational or financial grounds.<sup>76</sup> The first LSL, *Sir Lancelot*, was laid down in March 1962, launched in June 1963 and completed in January 1964. Five more ships followed,

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<sup>73</sup>. Ibid.

<sup>74</sup>. Ibid.

<sup>75</sup>. COS 6 mtg/63, 24 January 1963; DEFE 4/151. COS 36/63, 4 February 1963, report by the SRC; DEFE 5/134.

<sup>76</sup>. COS 88/63, 5 March 1963; DEFE 5/136.

being launched during 1966 and 1967: *Sir Galahad*, *Sir Belvidere*, *Sir Geraint*, *Sir Tristram*, and *Sir Percivale*. These ships were similar in size and capacity to *Sir Lancelot* but had increased vehicle stowage and improved flying facilities. The LSLs were operated by the Ministry of Transport until 1970 when they were taken over by the Royal Fleet Auxiliary.<sup>77</sup> Like the two assault ships all these vessels participated in the 1982 Falklands conflict.

During the later 1950s the Royal Navy was forced to re-evaluate its key rationale. The traditional role of defending the sea lanes in a major war against the Soviet Union was undermined by changing strategic factors. Although the defence of the United Kingdom and of Europe remained the top priority, this function was now to be fulfilled primarily by the nuclear deterrent. With the role of conventional forces in global war accorded only a very low priority, the Navy was forced to re-evaluate the emphasis it had placed on limited war and cold war duties. The Board of Admiralty therefore agreed to a shift in priorities away from their more traditional role in order to preserve core capabilities. This approach was adopted reluctantly as the path “*least damaging*” to naval interests. The limited war role called for new amphibious ships to replace existing worn out lift. These new ships were different from their predecessors. They were fast, long-legged, thoroughly modern vessels offering a far better amphibious capability than the ships they replaced. Unfortunately, it takes time to design and build new ships. It was not until the mid to late 1960s that the new ships were available. In the meantime, with the exception of the commando carriers, Britain’s amphibious lift was still provided by old LSTs and LCTs.

As Ministers of Defence both Watkinson and Thorneycroft were keen to promote amphibious capabilities which offered mobility and flexibility to British forces, allowing the Ministry of Defence to place less emphasis on fixed bases and garrisons. Since 1945 amphibious warfare had never been an important political issue. Interest in Parliament had been limited to occasional questions from retired Royal Navy and Royal Marine officers.<sup>78</sup> It was not an issue that

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<sup>77</sup>. *Jane’s Fighting Ships*.

<sup>78</sup>. *Parliamentary Debates (Hansard)*, Volume 480, Session 1950-51, Column 1339-1343. Volume 513, Session 1952-1953, Column 319. Volume 529, Session 1953-1954, Column 1327-1328. Volume 524, Session 1953-1954, Column 1980-1981.

aroused fierce debates. From 1956 there was a greater awareness of the value of amphibious capabilities and the growing interest of the Navy in amphibious warfare was reflected in the House of Commons.<sup>79</sup> Nevertheless it was not an issue divided along party lines. There was general cross-party support for amphibious capabilities, as there was general inter-Service agreement on their value. While generally in favour of improved amphibious capabilities, the War Office was to grow wary of attempts to expand this lift at the expense of the Army. Attempts by the Ministry of Defence to justify increasing amphibious capabilities because of the difficulties of Army recruitment were to fuel a growing suspicion of Admiralty motives. The Air Ministry were initially concerned that the commando carrier concept represented an incursion of the Navy into the air transport role. In the 1960s they were to become bitter opponents of the Admiralty's plans for seaborne task forces, advocating instead their own strategy of land based air power and air mobile troops. In the 1950s the foundations of future inter-Service conflict were being laid.

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<sup>79</sup>. **Parliamentary Debates (Hansard)**, Volume 570 to 619.

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## **Chapter Six: Figures 1 to 3**

Figure 1a. Bow Loading LST.

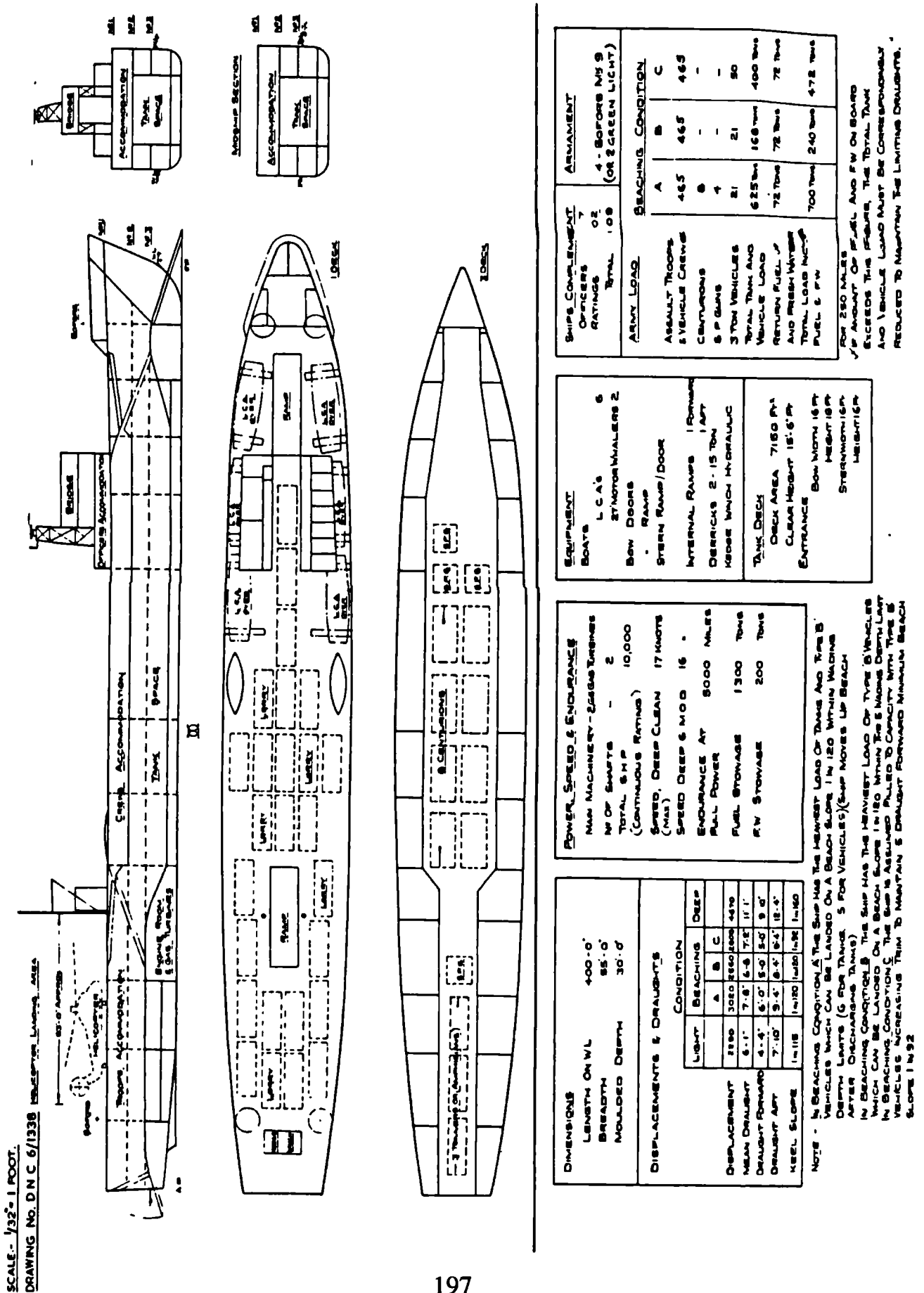
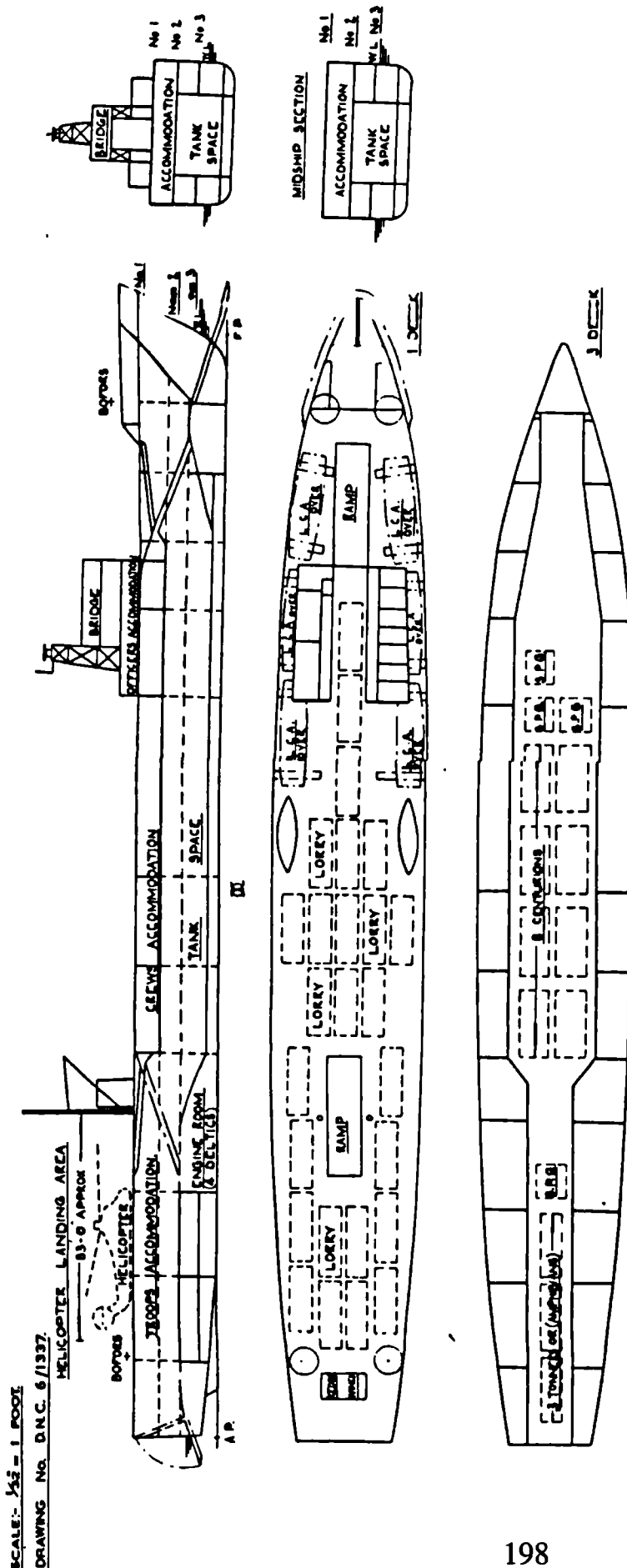


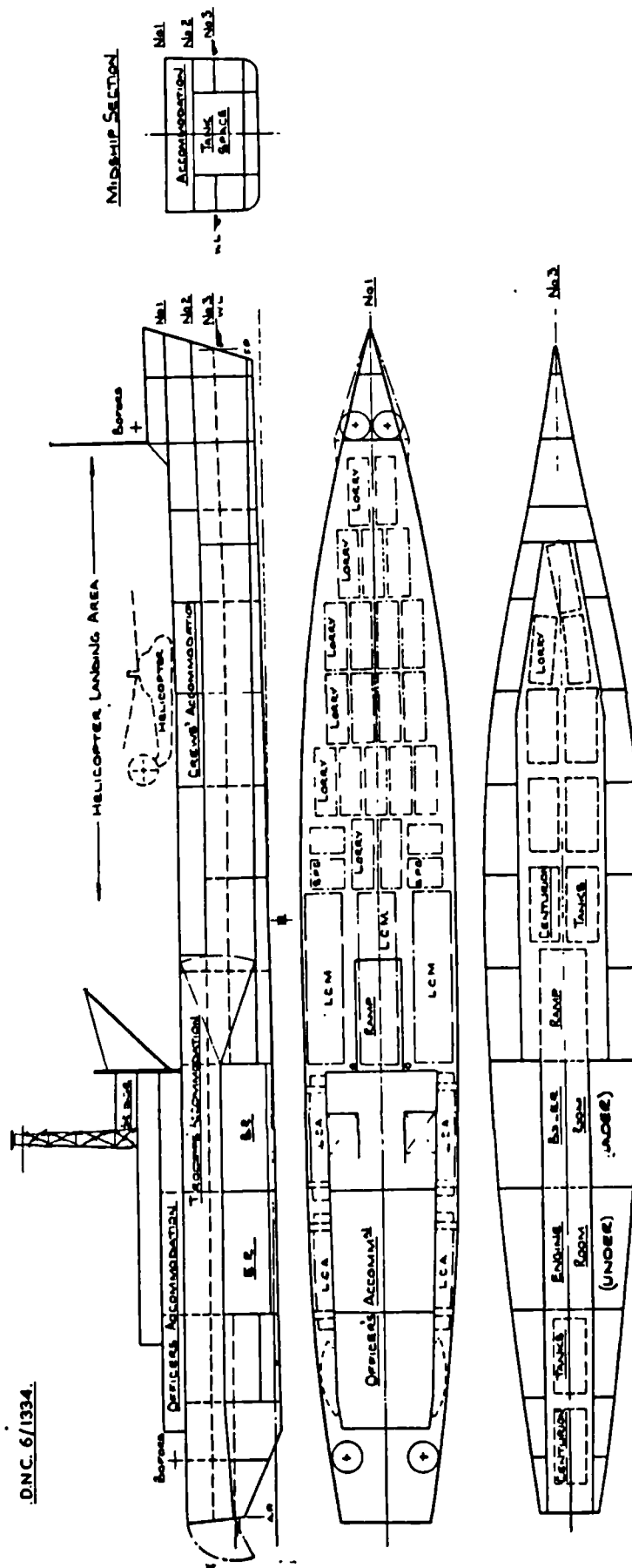
Figure 1b. Bow Loading LST.



DIMENSIONS		POWER, SPEED & ENDURANCE		EQUIPMENT		SHIPS COMPLEMENT		ARMAMENT	
LENGTH ON W.L.	400'-0"	MAIN MACHINERY	4 DELTICS	BOATS	L.C.A.'s	OFFICERS	10	4 - 4.5" BODIES MK 9	
BREADTH	55'-0"	NO OF SHAFTS	4	27 MOTOR WHALEES	6	RATINGS	10	(US 2 GREEN LIGHT)	
MOULDED DEPTH	30'-0"	TOTAL S.H.P.	6000	BOW DOORS	-	ARMY LOAD			
DISPLACEMENTS & DRAUGHTS		SPEED, DEEP CLEAN 15 KNOTS		STERN RAMP / DOOR		ASSAULT TROOPS		A	
DISPLACEMENT		SPEED DEEP 6 M.O.D. 14 -		INTERNAL RAMPS 1 FORMED		A VEHICLE CREWS		B	
MEAN DRAUGHT		ENDURANCE AT 5000 MILES		DERIGES 2-15 TON		CENTURIONS		C	
DRAUGHT FORWARD		FUEL STOWAGE 550 TONS		KEGGE WINCH HYDRAULIC		S.P. JUNS		4	
DRAUGHT AFT		F.W. STOWAGE 200 TONS		TANK DECK		TOTAL TANKS AND		27	
KEEL SLOPE		1 IN 12		DECK AREA 7150 FT <sup>2</sup>		VEHICLE LOAD		676 TONS	
IN BEACHING CONDITION		THE SHIP HAS THE HEAVIEST LOAD OF TANKS AND		CLEAR HEIGHT 15'-6" FT		RETURN FUEL		74 TONS	
TYPE 'B' VEHICLES WHICH CAN BE LANDED ON A BEACH SLOPE 1 IN 12		(SHIP MOVES UP BEACH AFTER DISCHARGING TANKS)		BOW WIDTH 16 FT		TOTAL TANKS AND		74 TONS	
IN BEACHING CONDITION 'A' THE SHIP HAS THE HEAVIEST LOAD OF TYPE 'B' VEHICLES WHICH CAN BE LANDED ON A BEACH SLOPE 1 IN 12		WITHIN WADING DEPTH LIMITS (6' FOR TANKS, 5' FOR VEHICLES)		STEEN WIDTH 16 FT		TOTAL TANKS AND		74 TONS	
THE 'S' WADING DEPTH LIMIT		THE SHIP IS ASSUMED FILLED TO CAPACITY WITH		ENTRANCE		FUEL & F.W.		74 TONS	
IN BEACHING CONDITION 'C' THE SHIP IS ASSUMED FILLED TO CAPACITY WITH		THE SHIP IS ASSUMED FILLED TO CAPACITY WITH		ENTRANCE		FUEL & F.W.		74 TONS	

NOTE:

Figure 2a. Stern Loading LST.



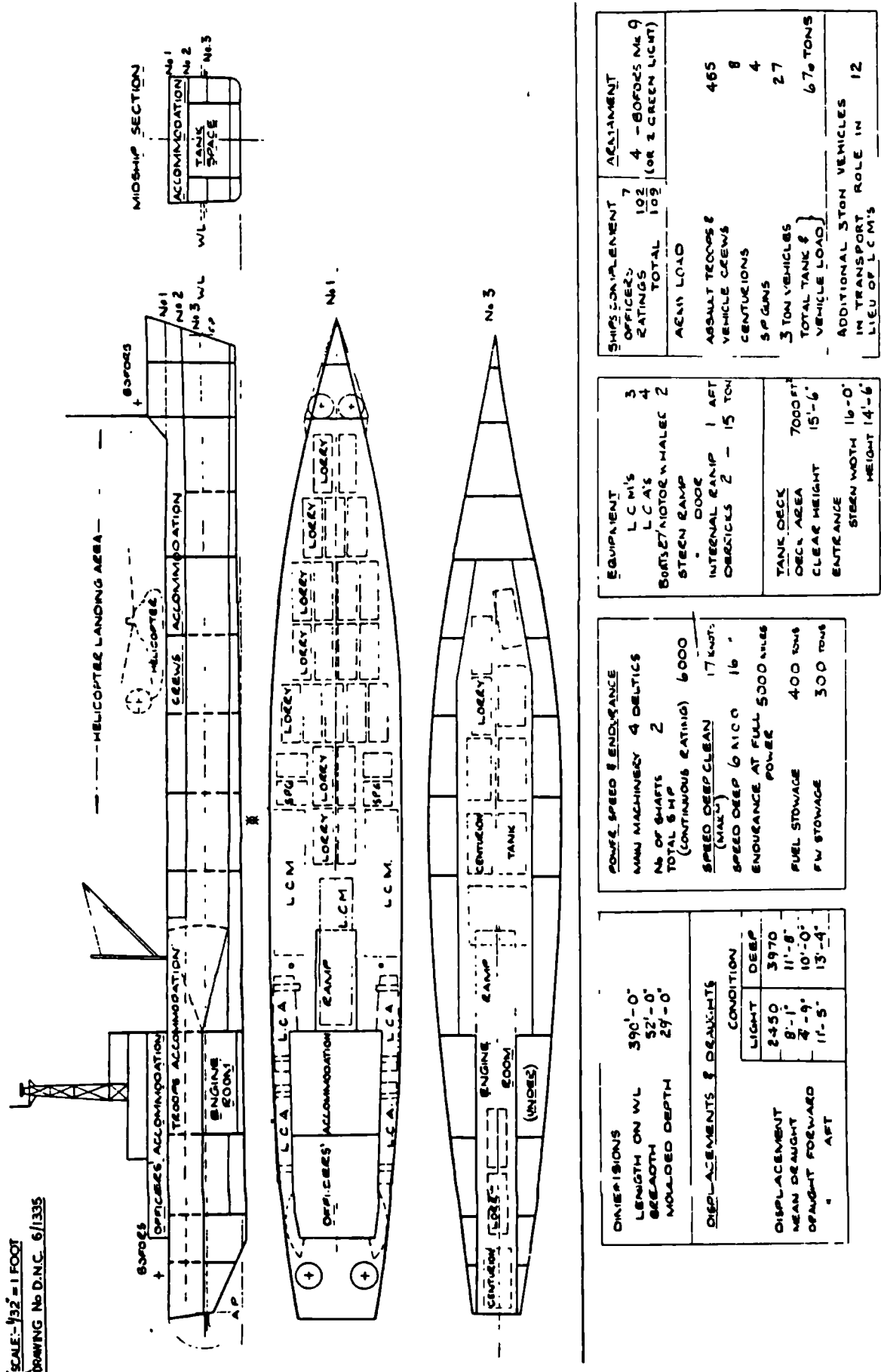
SHIPS COMPLIMENT		ARMAMENT
OFFICERS	5	4-60FORS MK 5
RATINGS	141	(OR 2 GREEN LIGHT)
TOTAL	150	
ARMY LOAD		
ASSAULT TEAMS & VEHICLE CREWS	465	
CENTURIONS	8	
SP GUNS	4	
3 TON VEHICLES	27	
TOTAL TANK & VEHICLE LOAD	576 TONS	
ADDITIONAL 3TON VEHICLES IN TRANSPORT ROLE IN LIEU OF LCM'S		12

EQUIPMENT	
LCM'S	3
LCA'S	4
BOATS 27 MOTOR WHALERS 2	
STERN RAMP	
DOOR	
INTERNAL RAMP 1 AFT	
DERRICKS	2-15TON
TANK DECK	
DECK AREA	7000 SQ FT
CLEAR HEIGHT	15'-6"
ENTRANCE	
STERN WIDTH	18'-0"
HEIGHT	16'-0"

POWER, SPEED & ENDURANCE	
MAIN MACHINERY	2-1000 STEAM TURBINES
NO OF SHAFTS	2
TOTAL SHIP (CONTINUOUS RATING)	20,000
SPEED DEEP CLEAN (MAX)	24-KNOTS
SPEED DEEP & MOD	23
ENDURANCE AT FULL POWER	5000 MILES
FUEL STORAGE	1500 TONS
FW STORAGE	300 TONS

DIMENSIONS	
LENGTH ON WL	400'-2"
BREADTH	54'-3"
MOULDED DEPTH	33'-3"
DISPLACEMENTS & DRAUGHT	
CONVERSION	
DISPLACEMENT	2770
MEAN DRAUGHT	8'-11"
DRAUGHT FORWARD	4'-8"
AFT	13'-2"

Figure 2b. Stern Loading LST.





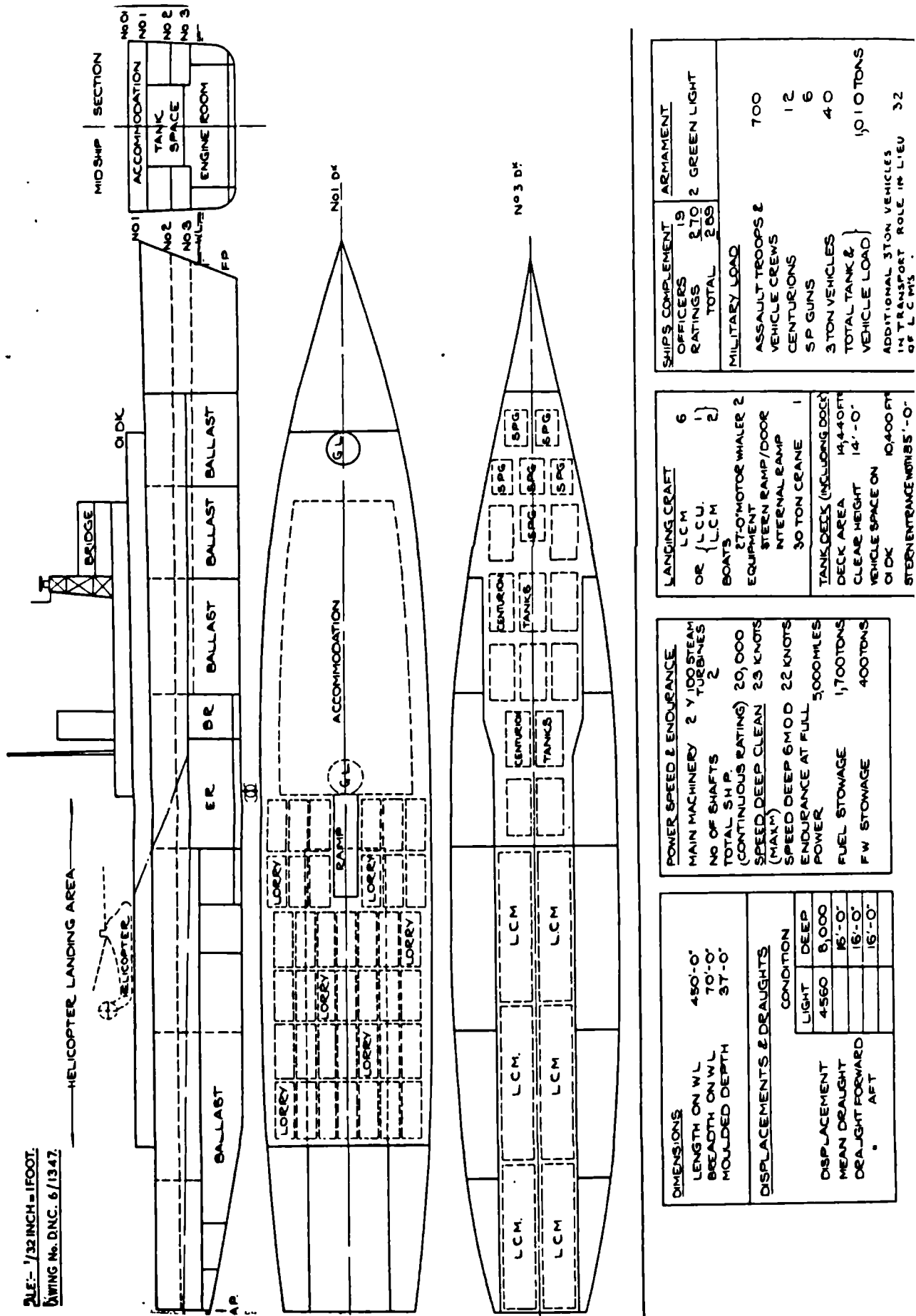
[illegible]

DIMENSIONS	
LENGTH ON WL	390'-0"
BREADTH	52'-0"
MOULDED DEPTH	25'-0"

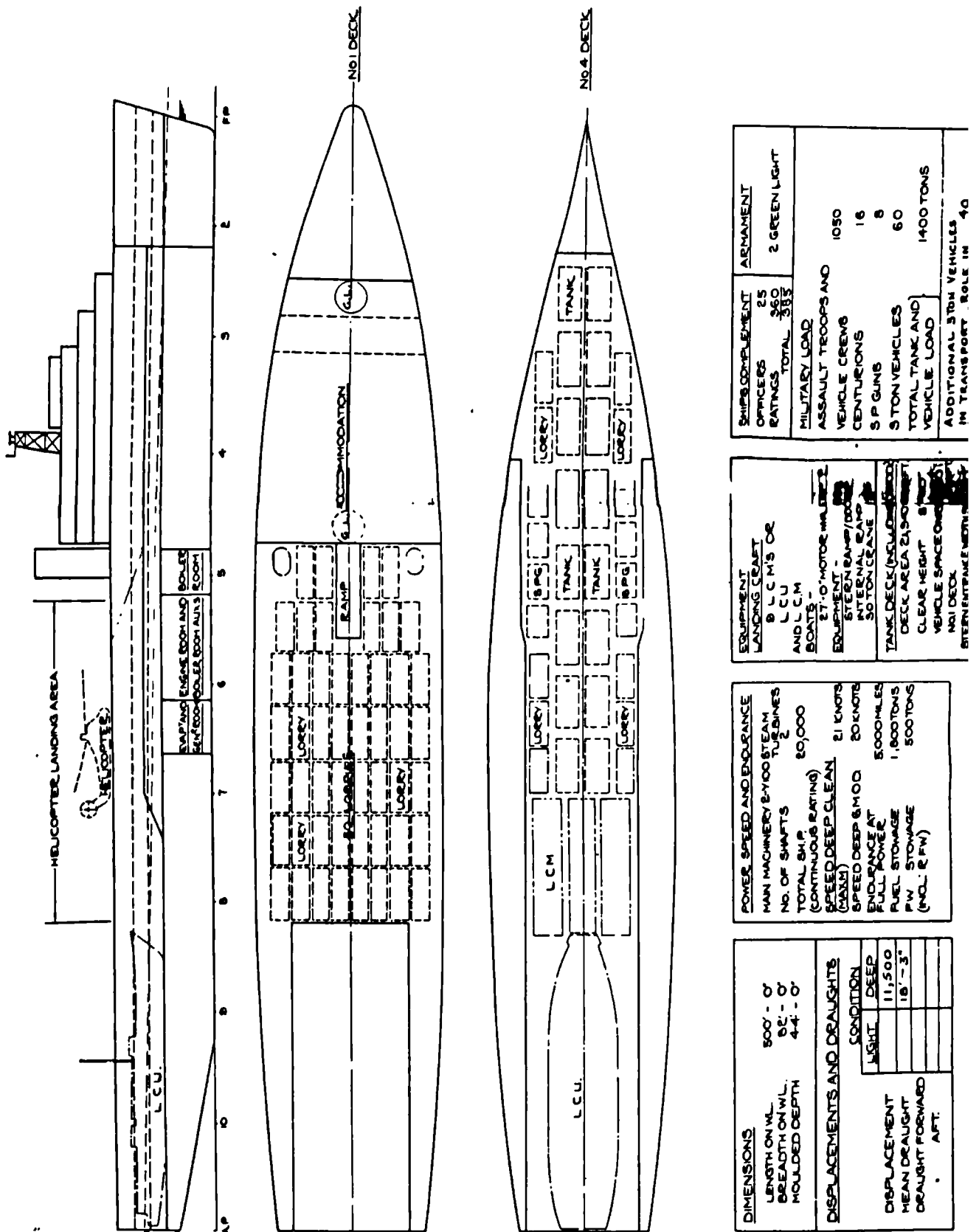
  

DISPLACEMENTS & DRAUGHTS		
	CONDITION	
	LIGHT	DEEP
DISPLACEMENT	2480	4750
MEAN DRAUGHT	8'-2"	13'-5"
DRAUGHT FORWARD	4'-10"	12'-0"
AFT	11'-6"	14'-10"

**Figure 3a. Amphibious Transport Dock.**



**Figure 3b. Amphibious Transport Dock.**



## CHAPTER SEVEN

### THE SEABORNE/AIRBORNE CONCEPT

The adoption by the Admiralty of the limited war role changed the way amphibious capabilities were viewed. They were now part of a wider intervention strategy designed to allow Britain to play a part on the world stage. A new generation of fast, capable amphibious warfare vessels was on order. This encouraged renewed thinking about amphibious warfare. In 1960 Basil Liddell-Hart wrote that in the existing situation of nuclear stalemate, amphibious capabilities were necessary as a counter and a deterrent to limited and local aggression. He believed that while airborne forces were useful, seaborne forces could not be ignored as they provided a flexibility denied to aircraft operating from fixed bases. While airborne forces were desirable, seaborne forces were essential.<sup>1</sup> In his conclusion to *The War at Sea*, published in 1961, Stephen Roskill strongly emphasised the historic value of amphibious forces.<sup>2</sup> In *The Strategy of Seapower*, published one year later, he considered that, after providing the nuclear deterrent, the creation of powerful amphibious forces should be the top priority for British defence policy. Clearly supporting current Admiralty plans, he called for the provision of two joint Service amphibious task forces capable of landing and supporting a brigade group at short notice.<sup>3</sup>

Operation *Musketeer* had demonstrated the limitations of using old equipment and outdated techniques in limited military interventions. The old concept of amphibious operations on the wartime model was not suited to the requirements of cold and limited war. A new concept of operations, designed specifically for limited war contingencies, was required. Consequently, a new operational concept, the seaborne/airborne concept was developed.<sup>4</sup> Designed to make full and efficient use of sea, land and airborne forces as an integrated whole, this concept replaced older, outdated views of

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<sup>1</sup> B.H. Liddell-Hart, "The Value of Amphibious Flexibility and Forces", *RUSI Journal*, 1960 p.483-492. also see, B.H. Liddell-hart, *Deterrent or Defence. A Fresh Look at the West's Military Position*, (London: Stevens and Sons Ltd, 1960) p.110-129.

<sup>2</sup> S.W.Roskill, *The War at Sea, 1939-1945. Volume 3, Part 2 - The Offensive*, (London: HMSO, 1961) p. 387-409.

<sup>3</sup> S.W.Roskill, *The Strategy of Seapower. Its Development and Application*, (Aylesbury: John Goodchild Publishers, 1986) p.253-255.

<sup>4</sup> Alternately known as the seaborne/airborne/land concept.

amphibious operations. Almost as soon as the concept was developed it was put to the test. In 1961 Britain responded to a perceived threat from Iraq to Kuwait by implementing reinforced theatre plan *Vantage*, the build up of land, sea and air forces in defence of Kuwait. In contrast to the response to the Suez crisis the military reacted quickly and effectively as the situation demanded. The operation was deemed a success and taken as evidence both of the validity of the seaborne/airborne concept and of Britain's continued role east of Suez in general.

The new concept of operations had been examined by AWHQ and the JSAWC in 1960. It was presented and discussed at the Staff Colleges, at the Staff Training Wing of the JSAWC and at appropriate operational commands.<sup>5</sup> Reflecting the new emphasis on cold and limited war operations, the concept stressed the need for seaborne and airborne forces to operate in concert in order to provide a mobile and flexible intervention capability. The need to respond quickly to crises meant that most of the initial forces employed would be provided from the particular theatre. Follow-on forces would come from adjacent theatres and from the United Kingdom. Some land forces would remain afloat although the bulk of troops from the United Kingdom would be air transported. Heavy equipment such as tanks would continue to be transported by sea. Air transported follow-up forces would rely heavily on stockpiles which would be established in likely areas of operations. It was appreciated that opposition could vary in intensity but assaults against heavily defended coastlines were not contemplated.<sup>6</sup>

The details of the new concept were set out in 1962 by the Joint Warfare Staff:

In the present concept of limited war our forces must be ready to counter sudden enemy intervention in a country that is neutral or friendly to us. The enemy will have the initiative and will be able to strike at the time and place he chooses, even if his moves can be foreseen, our forces may not be able to land before his active intervention, for political reasons. The requirement is for a force that can act quickly and is ready to fight immediately in an area that may be far from its base; and that has the hitting power and

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<sup>5</sup>. COS (61) 12, 13 January 1961, report by CAW; DEFE 5/110.

<sup>6</sup>. COS (61) 180, *Seaborne/Airborne/Land Concept*, 8 June 1961; DEFE 5/114.

mobility to take offensive action and get quick results, to prevent the war from extending or from escalating to global war.

It was anticipated that a properly balanced force was unlikely to be achieved unless airborne and seaborne forces operated in unison:

In this concept of joint seaborne/airborne operations, the amphibious and air transported forces are part of a single team, sea and air providing those elements of the force best suited to their characteristics and to the kind of operations expected.

The requirement to land troops as quickly as possible would sometimes conflict with the requirement to land balanced forces. It was recognised that as the air transported force and the seaborne force might arrive at different times or land far apart they needed to retain the ability to operate independently, at least in the initial stages of an operation. In summary:

The seaborne/airborne concept envisages amphibious and air transported troops landing at short notice and operating as a single team. each providing the forces best suited to its means. They will land simultaneously if possible, but each force must be balanced to enable it to operate independently for a while; and both forces must be ready to fight their way in.<sup>7</sup>

Responsibility for the development of the seaborne/airborne concept had rested with AWHQ and the Land/Air Warfare Committee. AWHQ was responsible for the seaborne side and the Land/Air Warfare Committee for the airborne side. Although the JSAWC and the School of Land/Air Warfare at Old Sarum maintained very close liaison, under existing arrangements seaborne/airborne operations were not examined together as one joint concept by all the parties concerned. At the request of the COS, the JPS studied this arrangement, reporting in June 1961. They considered that the main weakness in the existing system was the lack of any joint authority to promulgate and direct the new policy. They considered that there was *“no substitute for a fully integrated inter-Service approach.”*<sup>8</sup>

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<sup>7</sup>. DEFE 2/2074.

<sup>8</sup>. COS (61) 22 mtg, 28 March 1961; DEFE 4/134. COS (61) 180.

Examining what changes were necessary to rectify this situation, the JPS recommended disbanding AWHQ and the Land/Air Warfare Committee and proposed the creation of a joint Service organisation directly responsible to the COS for all matters concerning seaborne/airborne operations. The possibility of establishing a separate joint independent headquarters, on the lines of the wartime COHQ, was considered and rejected as unnecessary in peacetime. The JPS believed that it was more appropriate for all executive power to be exercised by single Service Ministries. Instead they recommended, and the COS approved, the establishment of a standing committee, called the Joint Warfare Committee, composed of senior representatives of the Services and of the Minister of Defence. This committee was charged with the direction and coordination of joint tactical doctrines, techniques, procedures and training requirements and for all aspects of seaborne/airborne operations short of global war, excluding essentially single Service matters.<sup>9</sup>

The Joint Warfare Committee (JWC) was duly established and AWHQ and the Land/Air Warfare Committee were disbanded. The JWC held its first meeting on 17 January 1962.<sup>10</sup> In February 1962 the COS approved proposals by the JWC for the formation of a small Joint Warfare Staff (JWS) and the following sub-committees to serve the JWC: the Offensive Support Sub-Committee; the Air Transport Support Sub-Committee; and the Amphibious Warfare Sub-Committee.<sup>11</sup> The JWS was formed on 2 April 1962. This staff was small and inter-Service. Its first director was Major-General R.D.Houghton, until lately employed as the last Chief of Amphibious Warfare. The JWS acted as the secretariat for the JWC and the Director, Joint Warfare Staff was to submit annual reports to the JWC who would forward these reports to the COS in much the same way that CAW had previously been required to do.

The Amphibious Warfare Sub-Committee of the JWC was responsible for advice and recommendations on the development of policy, techniques, tactical developments and joint Service training. It was to advise on the collection of intelligence required for amphibious

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<sup>9</sup>. COS (62) 12, 4 January 1962, report by the JPS; DEFE 5/123.

<sup>10</sup>. COS (62) 84, 28 February 1962; DEFE 5/124. COS 365/63, **JWC - Terms of Reference**, 8 November 1963; DEFE 5/144.

<sup>11</sup>. COS (62) 84.

operations and was to ensure standardisation and compatibility of equipment whenever possible. The responsibilities of AWHQ had in some respects been more wide ranging than those of the JWC, including responsibilities in the field of material and logistics. While it was intended that the JWC should maintain close ties in this field, these responsibilities reverted back to the relevant Services.<sup>12</sup>

A Joint Warfare Establishment replaced the JSAWC and the School of Land/Air Warfare. This establishment was created by amalgamating the Amphibious Warfare School with the School of Land/Air Warfare at Old Sarum. The Amphibious Training Unit, Royal Marines and the Trials Section remained at Poole administered by the Navy. The establishment was responsible for formulating and teaching the tactical doctrine, procedures and techniques required for joint warfare. The JWC was responsible for the policy and overall functioning of the Joint Warfare Establishment, while the administrative backing at Old Sarum was provided by the Air Ministry. The Commandant of the establishment was responsible to the JWC and the post was to rotate between the three Services.<sup>13</sup>

At first glance there seems little new about these developments. The rejection by the JPS of the concept of an independent organisation such as COHQ was reminiscent of similar Admiralty proposals dating back as far as 1943. Similarly, the main proposal of the 1953 Parker Working Party had been the amalgamation of the Amphibious Warfare Centre with the School of Land/Air Warfare at Old Sarum. What had changed was the context in which amphibious warfare was now viewed. In the 1940s the Admiralty were keen to have COHQ downgraded to the position of an inter-Service committee in order that they could control what was perceived as a nuisance organisation, a loose cannon that was a burden on already overstrained resources. In 1962 the situation was quite different. Amphibious operations were no longer seen in the context of global war. The new seaborne/airborne concept called for much closer tri-Service cooperation than before and introduced an air element, something that AWHQ had not been responsible for. Amphibious warfare was now central to the future of the Navy. The Admiralty representatives

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<sup>12</sup>. Ibid.

<sup>13</sup>. COS (62) 68 mtg, 30 October 1962; DEFE 4/148. COS (62) 426, report by the JWC; DEFE 5/131.



could be expected to do all they could to enhance amphibious capabilities. Under these conditions the future of amphibious warfare was better served by senior Admiralty representatives, backed up by the full authority of their Service, than by the independent representatives of AWHQ.

In August 1959 the COS decided to move the AW Squadron to Aden in conjunction with the move of a squadron of tanks and a Royal Marine Commando.<sup>14</sup> The move received Ministerial approval in October 1959. The ships of the AW Squadron were fitted with air conditioning at Chatham and Malta and the squadron moved to its new station in June 1960.<sup>15</sup> The key rationale for the move of the AW Squadron was for the support of Operation *Vantage*, the reinforcement of Kuwait. Kuwait was of particular importance to Britain. British Petroleum, an oil company owned by the British Government, held a 50 per cent share in the Kuwait Oil Company and in 1960 Kuwait had provided some 50 per cent of Britain's oil supplies.<sup>16</sup> Under the terms of the 1899 Anglo-Kuwaiti Treaty, Britain had been responsible for the foreign policy and defence of Kuwait. In June 1961 this treaty was terminated, being considered "*inconsistent with the sovereignty and independence of Kuwait*."<sup>17</sup> On 19 June 1961 an Exchange of Notes was signed that defined the new relationship between Britain and Kuwait. This Exchange of Notes recognised Kuwait as a sovereign and independent state and established Britain's readiness to come to its assistance if requested. As a successor state of the Ottoman Empire, Iraq had always claimed Kuwait as its own. This claim pre-dated General Kassim's rule but the Iraqi coup of 1958 which removed the pro-British government brought with it the heightened possibility of Iraqi military action to secure what it considered to be a part of the Basra province.

Supported by an influx of Soviet weaponry, the Iraqi armed forces were considerably larger than their Kuwaiti counterparts. The army was believed to be equipped with about 110 Centurion tanks, 40 US M-24 tanks and possibly between 100 and 150 Soviet T-54s. Their

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<sup>14</sup>. COS (59) 49 mtg, 5 August 1959; DEFE 4/120.

<sup>15</sup>. COS (59) 60 mtg, 24 September 1959; DEFE 4/121. COS (60) 63 mtg, 13 October 1959; DEFE 4/121. COS (59) 230, 22 September 1959, note by the War Office; DEFE 5/95.

<sup>16</sup>. Darby, *British Defence Policy*, chapter six.

<sup>17</sup>. Ralph Hewins, *A Golden Dream. The Miracle of Kuwait*, (London: W.H.Allen, 1963) p.284-285.

airforce was equipped with British Hunters and Soviet MiG 17 and MiG 19 aircraft.<sup>18</sup> To meet this, Kuwait could only field one large regimental group, including half a squadron of Centurion tanks.<sup>19</sup> In order to counter the threat of internal subversion within Kuwait or of an Iraqi attack, Commander-in-Chief British Forces Arabian Peninsula (BFAP), prepared reinforced theatre plan *Vantage*, in October 1959. The plan catered for the rapid deployment to Kuwait of a reinforced brigade group with air and naval support under a variety of circumstances. It was assumed that Iraqi forces would not have entered Kuwait prior to British intervention and that four days warning of an Iraqi attack would be received. *Vantage* came into force in November 1959. Its movement appendices were revised in December 1960 to cater for the reinforcement of BFAP.<sup>20</sup>

A key part of this reinforcement was the stationing of a squadron of tanks and the AW Squadron within Middle East Command. Under *Vantage*, the primary task of the AW Squadron was to provide follow up lift for troops transported by air. Although no strongly opposed landing was anticipated, the squadron was to be prepared to face minor opposition either on the beaches or ashore, before the sea landed elements could meet up with the airborne element. It would take nine days for a slow LST to sail from Aden to Kuwait and so it was decided to keep one LST with half a squadron of tanks permanently on station in the Persian Gulf. The two Royal Navy LSTs were to maintain this Seaborne Tank Force for as long as practicable. A WD LST could meet this requirement during periods when a Royal Navy ship was not available. In order to provide the necessary lift of vehicles and stores from the military stockpile at Bahrain to Kuwait, the LCT(8)s *Bastion*, *Redoubt* and *Parapet* were permanently based at Bahrain.<sup>21</sup>

The state of readiness prescribed in *Vantage* was relaxed to four days in July 1960. It was assumed that in order to attack Kuwait, Iraq would need to move a brigade of armour from the Baghdad area to Basra and that this would provide at least four days warning. The

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18. Neville Brown, *Strategic Mobility*, (London: Chatto and Windus, 1963) p.91-92.

19. Hewins, *A Golden Dream*, p.287.

20. COS (61) 378, *Report by the Commander-in-Chief Middle East on Operations in Support of the State of Kuwait in July 1961*, 18 October 1961; DEFE 5/118. COS (62) 58, *Examination of the C-in-C's Report*, 15 February 1962; DEFE 5/124.

21. COS (61) 73, 2 March 1961, letter from C-in-C Middle East to COS; DEFE 5/111.

most recent British assessment of the Iraqi threat, dated 12 June 1961, stated that it was unlikely that Iraq would risk an attack on Kuwait and that for political reasons an attack would probably be preceded by an attempted insurrection.<sup>22</sup> On 26 June, within a week of Sheikh Abdullah becoming a fully sovereign ruler, the Iraqi leader, General Kassim, publicly claimed that Kuwait was a part of Iraq and that the Sheikh was the Governor of the Kuwait district of Iraq. Kassim rejected the new British Treaty with Kuwait but stopped short of issuing an ultimatum or threatening annexation.<sup>23</sup> In Britain this was perceived as a prelude to an Iraqi attack. At this critical moment a reassessment showed that the Iraqi forces already in the Basra region were adequate to seize Kuwait and that they would probably not wait for armour from Baghdad before launching an attack.<sup>24</sup>

In response to the perceived threat, on 28 June Rear-Admiral Fitzroy-Talbot, Flag Officer Middle East (FOME) based at HMS *Jufair* in Bahrain, ordered the commando carrier HMS *Bulwark* to proceed directly from Karachi to Kuwait. In Aden, HQ Middle East Command ordered all forces for *Vantage* to be brought to the required state of readiness and the staffs in Aden began promulgating the necessary amendments to movement tables. *Bulwark*, with 42 Commando embarked, had been on passage to the Persian Gulf to conduct hot weather trials and was not part of the forces committed to *Vantage*. The ship was deployed to the region to be available in case of conflict between Kuwait and Iraq.<sup>25</sup> During the night of 28/29 June an assessment received from the British Military Attaché in Baghdad concluded that Kassim was probably preparing “*crash action*”.<sup>26</sup> At that time British forces within Middle East Command consisted of:

### **Royal Navy**

The frigates *Loch Alvie* at Bahrain, *Loch Ruthven* in East African waters and *Loch Fyne* in dock at Karachi. The AW Squadron, consisting of HMS *Meon*, HMS *Striker* and the LCTs *Redoubt*, *Bastion*

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22. COS (61) 378.

23. Hewins, *Golden Dream*, p.285.

24. COS (61) 378.

25. Interview with Captain R.D.Franks.

26. Ibid. Unless otherwise stated the following discussion of Operation Vantage is based on the C-in-C's report (COS (61) 378) and on Air Chief Marshal Sir David Lee, *Flight from the Middle East. A history of the Royal Air Force in the Arabian Peninsula and adjacent territories 1945-1962*, (London: HMSO, 1980) chapter 9.

and *Parapet*, was at Bahrain. The LST(A) *Striker* had embarked a half squadron of 3rd Carabiniers (Prince of Wales's Dragoon Guards) equipped with Centurion tanks. By chance *Striker* was due to be relieved on 4 July by the WD LST *Empire Gull* which was already in the Gulf with a further half squadron of 3rd Carabiniers, preparing for the handover. In addition to these ships and craft there was HMS *Bulwark* which had already been ordered to Kuwait.

### **Army**

The 11th Hussars and 3rd Carabiniers were stationed in Aden. Two companies of the 2nd Battalion, Coldstream Guards were at Bahrain as the normal internal security detachment, while HQ 24 Brigade with the 1st Battalion, the King's Regiment and the 1st Battalion, The Royal Inniskilling Fusiliers was in Kenya. Although outside the command, the Parachute Regiment was based at Cyprus. In addition 45 Commando was in Aden.

### **Royal Air Force**

Numbers 8 and 208 Hunter Squadrons were at Aden and Nairobi respectively. No.37 Squadron consisting of four Shackletons was based in Aden. Air Forces, Middle East had a medium range transport force of 12 Beverleys and six Valletas and a short range transport force comprising five Pembrokes and 16 Twin Pioneers.

Heavy equipment was stockpiled in Kuwait and Bahrain. At Kuwait eight Centurion tanks and ammunition were stockpiled for British use. At Bahrain the much larger stockpile included armoured cars and vehicles, aircraft equipment, guns and ammunition, tents, rations and stores of all varieties, sufficient to meet the immediate needs of British forces deployed in Kuwait. The majority of the stores required to build up and maintain forces in Kuwait were held at Aden.

Following the discouraging news from Baghdad, HQ Middle East Command ordered further preparatory moves. HMS *Meon* and *Striker* were ordered to sail to Kuwait but to remain out of sight of land. Crews for the tanks on board the *Empire Gull* were ordered to proceed to Bahrain as soon as possible. No.208 Squadron flew from Nairobi to Bahrain where it was joined by No.8 Squadron, the Tactical Air Commander and Tactical Wing HQ. From Bahrain the Hunters were in a position to give limited air cover over Kuwait. Two Shackletons of No.37 Squadron were also deployed at Bahrain in order to provide a night reconnaissance capability. The Bahrain

stockpile and emergency camps at Aden and Bahrain were activated. Further afield, the Ministry of Defence ordered the aircraft carrier, HMS *Centaur* , to sail from Gibraltar to the eastern Mediterranean. Another carrier, HMS *Hermes* , sailed from the United Kingdom but did not proceed beyond Gibraltar. The Ministry ordered a Canberra squadron to redeploy from Germany to Sharjah, two battalions of 24 Brigade to move to the concentration area and 29 Field Regiment Royal Artillery, less one battery, to be brought to strength in the United Kingdom. Middle East Command was informed that the carrier, HMS *Victorious* , which had been en route to Hong Kong, had been ordered to Bahrain and was expected to arrive on 8 July.

On 30 June Sheikh Abdullah formally requested British intervention and that evening Air Marshal Sir Charles Elworthy, Commander-in-Chief, Middle East Command, was instructed to implement *Vantage* . Elworthy considered that as an Iraqi attack seemed imminent it was important to get as many fighting “teeth” forces into Kuwait as soon as possible, if necessary at the expense of building up balanced forces. Elworthy hoped to have a force comprising two battalions of infantry, a squadron of tanks, an armoured car squadron and two squadrons of Hunters established in Kuwait by dawn on 2 July. An unexpected, but not unforeseeable, difficulty presented itself. Both Turkey and Sudan refused to allow RAF aircraft carrying troops for Kuwait to overfly their territory. Neither country had previously had any objections to the overflight of RAF aircraft and Turkey was formally allied to Britain through NATO. Elworthy was informed of the ban during the night of 30 June/1 July. The immediate consequence was that the Parachute Regiment could not deploy from Cyprus to Kuwait via Turkey (and Iran). The amphibious ships assembling off Kuwait were not subject to the political sensibilities of neighbouring states. The only troops that Elworthy could guarantee to have in Kuwait throughout 1 July were 42 Commando from *Bulwark* and the half squadron of tanks embarked in *Striker*.

The helicopters of 848 Squadron landed the first Commandos from *Bulwark* at Kuwait New Airport shortly after 09.00 on 1 July. Poor visibility made this task difficult but high winds enabled the helicopters to embark full loads while the ship was at anchor. The helicopters were immediately followed by ten Hunter fighters of No.8 Squadron which landed at Kuwait New Airfield and assumed

immediate readiness. Soon afterwards a Beverley brought in the Tactical Air Commander, the Wing Leader and the necessary RAF ground crews and other personnel. The landing of tanks from HMS *Striker* was hampered by the fact that the previous week the designated landing "hard" had been demolished. An alternative landing site was found but, as it was not suitable for the LST to beach, *Striker* had to discharge its load by Rhino ferry.

Five Britannias, originally intended to lift a parachute battalion from Cyprus, were flown to Aden via the El Adem-Nairobi-Aden route, carrying RAF personnel and a Parachute Regiment Light Battery. It was decided that in order to get as many troops as possible into Kuwait to support the amphibious forces, 45 Commando, 11th Hussars and the two companies of Coldstream Guards at Bahrain should be given the highest priority. British forces in Kuwait by the end of 1 July consisted of only 42 Commando, the half squadron of tanks landed by *Striker*, two companies of Coldstream Guards brought forward by air from Bahrain and a Royal Marine Platoon from the frigate HMS *Loch Alvie* which was offshore alongside *Bulwark* and *Meon*. The air contingent consisted of No.8 Squadron and a detachment of Twin Pioneers. By nightfall troops had begun to deploy along the Mutla Ridge, a defensive feature to the northwest of Kuwait City already occupied by Kuwaiti troops. These forces were hardly of sufficient strength to repulse a determined Iraqi attack. Poor visibility caused by blowing sand precluded air reconnaissance by Hunters and Canberras and would have ruled out any ground attack missions. Reconnaissance flights were flown by Twin Pioneers and Kuwaiti Austers.

During the afternoon of 1 July Elworthy was informed that both Turkey and Sudan had agreed to lift the overflight restrictions. However, the former was only prepared to allow flights by night. Turkey withdrew this permission after 4 July when news that this route was being used leaked out. The restriction to night flying caused difficulties and delay but was certainly better than nothing. The result of the loosening of restrictions was that Transport Command aircraft began to arrive in Middle East Command in adequate and then later in ample numbers. By 4 July Transport Command had committed 14 Britannias, 12 Beverleys and 27 Hastings

to *Vantage* . These supplemented the 12 Beverleys and six Valletas of the AFME force.

According to Elworthy, in these initial stages his plan was to:

deploy two battalions along the Mutla Ridge, supported by British and Kuwaiti tanks and artillery, to hold a further battalion with a squadron of British tanks as a counter-attack force, to keep a fourth battalion in Kuwait Town as a mobile reserve, with a fifth in Bahrain. The screen between the Ridge and the frontier was to be provided by British and Kuwaiti armoured cars.

This land force was to be supported by two squadrons of Hunters and the Twin Pioneers at Kuwait New Airfield, the Canberra squadron at Sharjah and the Shackletons at Bahrain.

45 Commando began to arrive on 2 July, completing the move from Aden the next day. On 2 July the Parachute Light Battery arrived, less mortars and vehicles, as did a squadron from the 11th Hussars. HMS *Bastion* and *Redoubt* landed equipment, stores, ammunition and armoured cars from Bahrain. The half squadron of tanks was landed from *Empire Gull*. The following day 2nd Parachute Battalion began to arrive by air and the crews for the stockpiled tanks arrived. The build up was not complete until 9 July, by which time there were 4,112 Army personnel, 596 RAF personnel and 960 Royal Marines ashore. This military force was under the tactical command of Brigadier D.G.T.Horsford, officer commanding 24 Brigade. With the arrival of the 24th Brigade by air, the two Commandos were able to fall back from the Ridge and form a reserve. The Coldstream Guards returned to their internal security duties at Bahrain on 6 July.

Naval forces played a key part in Operation *Vantage* . The helicopter landed Commando of HMS *Bulwark* was the only complete unit in Kuwait until the early hours of 3 July, when 45 Commando completed its airlift from Aden. Prior to 3 July, when the crews for the tanks stockpiled in Kuwait arrived, the only British tanks in Kuwait were those landed by *Striker* and *Empire Gull* . After landing their tanks these two LSTs joined the three LCT(8)s of the AW Squadron and the WD LSTs, *Empire Grebe* and *Empire Skua* , in lifting personnel and equipment from Persian Gulf bases to Kuwait. In the absence of normal RAF/Army facilities the LSH(S), HMS *Meon* , played a vital

role, acting as a communications link between the Army in Kuwait and Bahrain. The frigate, *Loch Alvie* , acted as Naval Gunfire Support Ship, despite the inadequacy of its armament for this role. This was a particularly useful role as the Army had no artillery in Kuwait. At night the frigate undertook anti-MTB/Dhow patrols across the Shatt el Arab to stop any Iraqi seaborne attacks. After landing her Commando and its transport, *Bulwark* remained off Kuwait in administrative support of the Commando. As a fully air conditioned ship, *Bulwark* was used to provide 24 hours rest and recuperation for parties of 200 men at a time, enabling them to “*sleep in air-conditioned spaces, have their laundry done, and generally refit themselves*” .

The frigates, *Loch Fyne* and *Loch Ruthven* , arrived off Kuwait on 5 and 7 July respectively. The aircraft carrier HMS *Victorious* arrived on 9 July with the frigate *Lincoln* and destroyer *Cassandra* . Further Naval reinforcements for the Gulf included HMS *Centaur* , which arrived off Kuwait on 31 July. to relieve *Victorious* . The destroyers *Camperdown*, *Finisterre* and *Saintes* and the LST *Messina* accompanied *Centaur* to the Gulf. The frigate *Loch Inch* was brought forward from the Mediterranean and the frigates *Llandaff* and *Yarmouth* were sent from the Indian Ocean to the region.<sup>27</sup> The 108th Minesweeping Squadron sailed from Malta, arriving in the Persian Gulf on 21 July.<sup>28</sup>

Elworthy had always planned to command *Vantage* from Bahrain rather than Aden. This had a dual advantage. Firstly, the closer proximity to Kuwait cut the communications load between the Gulf and HQ Middle East in Aden. Secondly, it allowed him to co-operate with the Political Resident, Persian Gulf. The location of FOME and the Military Committee, Persian Gulf at Bahrain offered a ready made nucleus for an operational headquarters. Elworthy moved to Bahrain with a small secretariat on 2 July, accompanied by Major-General Robertson (GOC). Air Vice-Marshal Lee (AOC) remained in Aden until 5 July to ensure that the air lift went smoothly. HMS *Jufair* was

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27. Grove, *Vanguard to Trident*, p.248. ADM 53/155427, HMS *Centaur*, Ship's Log. ADM 53/156513, HMS *Saintes*, Ship's Log. ADM 53/155339, HMS *Camperdown*, Ship's Log. ADM 53/15571, HMS *Finisterre*, Ship's Log. ADM 53/156858, HMS *Victorious*, Ship's Log. ADM 53/156061, HMS *Llandaff*, Ship's Log. ADM 53/157032, HMS *Yarmouth*, Ship's Log. ADM 53/156095, HMS *Loch Inch*, Ship's Log.

28. COS (61) 378.



placed at the disposal of the Commander-in-Chief and a small joint headquarters was established to control the whole operation. A Joint Operations Centre was set up in Bahrain but only operated as an information centre. Tactical command was exercised in Kuwait by Brigadier Horsford and Air Commodore Beresford. Captain Franks in *Bulwark* was the Naval Force Commander until the arrival of *Victorious* with a flag officer on board. Captain AW Squadron was Senior Naval Officer Kuwait and as such supervised the running of the port. The command system worked well. The Commander-in-Chief and his three subordinates were close enough to Kuwait to allow for daily visits, in order to keep in touch with events while still operating from a centre with superior communications to Aden and London. Such difficulties as arose were largely the result of the inadequate communications facilities rather than the command organisation.

Communications facilities between Kuwait and Bahrain, and between the Persian Gulf and Aden and London had been overloaded. According to the AOC at the time, it had long been known within the Command that communications facilities throughout the Arabian Peninsula were inadequate and that in the event of *Vantage* they would be severely tested. Even in the preparatory stages of the operation, the communications system became overloaded as signals were issued with unnecessarily high precedence in an endeavour to get them through. A semblance of control was maintained by the introduction of an emergency censorship procedure known as *Minimise* but the situation was such that Air Vice Marshal Lee had to resort to sending bundles of Immediate signals to Bahrain from Aden by special aircraft. In Kuwait the climatic conditions allied to blowing sands did much to degrade battlefield communications. Unserviceability of radio sets was not helped by the fact that many had been stored in Bahrain in unsuitable conditions. Differences in equipment and procedures between the three Services caused further difficulties and called for a measure of improvisation. The role of HMS *Meon* as a Communications Relay Ship between Kuwait and Bahrain was a vital one.<sup>29</sup>

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<sup>29</sup>. Lee, *Flight from the Middle East*, p.180-182.

The operation was disadvantaged from the outset as *Vantage* was essentially outdated. A revised concept was in the course of preparation when the crisis broke. The new plan, *Bellringer*, was not due to come into effect until September 1961 and there were a number of discrepancies between *Vantage* and existing operational instructions and arrangements made in anticipation of *Bellringer*. Air Marshal Elworthy considered that had *Bellringer* been in force, the mounting of the operation would have been less complicated. In fact, the operation as mounted was closer to *Bellringer* than *Vantage*. In his report to the COS, Elworthy concluded that once a plan was no longer considered to be the best to meet requirements, a new one with complementary operational instructions should be issued as quickly as possible.

The situation regarding air defence was particularly worrying. Prior to the crisis Kuwait possessed no radar. The only transportable RAF radar that existed in the theatre was a Type Sc 787. This was a light weight equipment which had limited performance, lacking a height finding capability. This equipment was flown forward from Bahrain at an early stage and manned by an operating crew from the United Kingdom. The equipment was pressed into service before its planned date and before essential test equipment had arrived. Not surprisingly, difficulty was experienced in bringing it to operational standards and the radar did not become fully operational until 18 July.

From 1 July RAF Hunters operating from Kuwait offered a limited daylight air defence capability, directed by HMS *Bulwark's* radar. *Bulwark* could provide early warning out to 80 miles. A full air defence capability was not achieved until HMS *Victorious* began operations on 10 July. In the opinion of Air Marshal Lee, prior to the arrival of *Victorious* the problem of air defence "*could have posed almost insuperable problems for the two Hunter Squadrons*".<sup>30</sup> *Victorious's* complement of Sea Vixens directed by the ship's Type 984 3-D radar "*provided for the first time a reasonably sophisticated day and night air defence for the forces in Kuwait*".<sup>31</sup> The ship's Scimitars complemented the RAF Hunters in the ground attack role, although lack of wind in the Gulf meant that they could not take off carrying long range fuel tanks and this limited their time over the

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<sup>30</sup>. Ibid. p.180.

<sup>31</sup>. COS (61) 378.

operational area to about twelve minutes. Due to dust conditions ashore, the Type 984 radar proved not to be effective over land and so an air defence frigate was stationed closer inshore to provide cover with its Type 960 radar, which gave "*excellent cover*".<sup>32</sup>

The forces in Kuwait were heavily dependent on air support in order to offset their lack of artillery or anti-tank weapons. This air support was to be provided by RAF Hunters and Canberras and Royal Navy Scimitars. Unfortunately, conditions in Kuwait made the operation of aircraft extremely difficult. Air Marshal Elworthy acknowledged in his report that the effectiveness of ground attack aircraft would have been severely limited by the poor visibility experienced in the early days of June.<sup>33</sup> While it is true that Iraqi aircraft would also have been affected by these conditions the Iraqis were not so dependent on air support as their potential enemies. Without close air support, the lightly armed troops defending the Mutla Ridge would have had little with which to disperse enemy concentrations of armour.

The delays caused by the overflight restrictions imposed by Turkey and Sudan confirmed the existence of a Middle East "*air barrier*". It showed the fallacy of the belief that a strategic reserve could be held in Britain and airlifted to trouble spots by the long range aircraft of Transport Command. As Elworthy concluded, for air reinforcement to be viable either sufficient aircraft would have to be stationed either side of the barrier, or Britain would have to resort to deliberate overflight without permission. For *Vantage* Transport Command had eventually proven equal to the task in hand. However, the required lift had only been achieved with the load of three Royal Rhodesian Air Force Canadairs and the charter of 17 civil airliners.<sup>34</sup>

One problem associated with air transported troops was that of heat exhaustion. Contemporary commentators laid great stress on the fact that troops airlifted from outside the Persian Gulf and Aden suffered from higher incidents of heat exhaustion than acclimatised troops already deployed in the region. Phillip Darby quotes a report by the Army's Operational Research Establishment which showed that although heat casualties were negligible amongst men already

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<sup>32</sup>. Ibid.

<sup>33</sup>. Ibid.

<sup>34</sup>. Darby, *British Defence Policy*, p.247.

stationed in Aden and the Persian Gulf, they increased appreciably for troops transported forward from Kenya and Cyprus. Reportedly, some ten per cent of troops transported directly from Britain to the Persian Gulf were out of action due to heat disorders within the first day.<sup>35</sup> Elworthy considered that the incidence of heat exhaustion was greatly exaggerated by the Press. He reported that all cases in hospital during this period were mild.<sup>36</sup> Sir David Lee agreed that the incidence of heat exhaustion was exaggerated by the Press at the time. He recalls the usual cure for heat exhaustion being a few hours in an air conditioned room and liberal doses of salt.<sup>37</sup> Operation *Vantage* highlighted the difficulties of conducting operations in extreme climates without fully acclimatised troops. Had soldiers and airmen been exposed to the rigours of actual combat one must assume that problems with the heat would have been exacerbated.

A strong naval force was eventually concentrated within Middle East Command. However, it took some time to assemble. Air Marshal Elworthy considered that had hostilities broken out, a decision would probably have been reached before all reinforcing ships reached the Gulf. Under *Vantage*, the reinforcement of a carrier group from the Far East was envisaged. It was ten days after the initial landing before HMS *Victorious* arrived with her escorts. The need to sail at 22 knots to preserve fuel and to enable the slow frigate HMS *Lincoln* to keep up delayed the arrival of these ships.<sup>38</sup> There was only one escort with *Bulwark* until the arrival of *Loch Fyne* on 5 July. This was inadequate to deal fully with the threat from Iraqi MTBs and thus *Bulwark* was forced to withdraw southward each night. The minesweeping force was particularly slow to arrive. No minesweeping resources were held in the Gulf. The presence of the AW Squadron had been planned to cater for precisely such an emergency, but it was sheer luck that *Empire Gull* was in the Gulf when the crisis broke.

As an exercise in foreign policy Operation *Vantage* was a great success. Five years after the debacle over Suez Britain had demonstrated an ability to intervene rapidly in support of a friend and

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35. Ibid. 248. Hewins, *Golden Dream*, p.297.

36. COS (61) 378.

37. Lee, *Flight from the Middle East*, p.182-183

38. Grove, *Vanguard to Trident*, p.248.

ally. The Iraqis were seen to be deterred. Even if General Kassim had had no intention of intervening in Kuwait, and there is no evidence that he did, Britain had demonstrated a firm resolve to defend its interests in the region. The operation demonstrated the value of amphibious capabilities as a potent deterrent to hostile military action and provided a chance to truly test the new seaborne/airborne concept. Captain Franks, commander of HMS *Bulwark*, was glad of the opportunity to demonstrate the utility of his ship:

I could not be more grateful to General Kassim; the operation was tailor made to our requirements. The whole concept of the commando ship and our eighteen months of intensive training was proved to be exactly what was required. We were able to put a small but efficient unit down in the right place at the right time and support it with all its requirements, which undoubtedly helped to souse this particular *brush-fire*.<sup>39</sup>

The Minister of Defence saw the operation as a vindication of his support for amphibious capabilities.<sup>40</sup> At a meeting of the Cabinet on 3 July he stressed the role that amphibious forces played in Operation *Vantage*, telling his colleagues that:

The operation had demonstrated both the value of amphibious forces in providing military assistance at relatively short notice and the political difficulties which might be expected in obtaining overflying rights, even from allies, when there was a risk of actual hostilities.<sup>41</sup>

Despite the apparent success of the operation, in many respects it was fortunate that no Iraqi attack materialised. During the first few days of *Vantage* the forces deployed within Kuwait cannot be considered sufficient to have repelled any serious assault. Not until ten days after the initial landings was there a sophisticated air defence capability available. The troops ashore had no artillery or anti-tank weapons and did not complete their build up until 9 July, nine days after Britain received the request for intervention. This represented a considerable improvement on the response time for Operation

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<sup>39</sup>. R.D.F [R.D.Franks], "Kuwait", in *Naval Review*, Volume 50, 1962. p.39-42.

<sup>40</sup>. Watkinson, *Turning Points*, p.134-135.

<sup>41</sup>. CC (61) 38th Conclusions, Cabinet meeting held on 3 July 1961; CAB 128/35 (part one).

*Musketeer* but would hardly have been adequate to deal with a rapid and determined Iraqi thrust into Kuwait. In addition the forces for *Musketeer* had to prepare for an opposed landing. In July 1961 *Vantage* represented a build-up operation rather than an assault. In his official report Air Marshal Elworthy acknowledged that the response to any future threat would have to be much quicker.

The JPS examined Elworthy's report and their subsequent report was endorsed by the COS on 16 January 1962.<sup>42</sup> The JPS supported most of Elworthy's conclusions. In particular, they stressed the need to either station sufficient aircraft on the appropriate sides of any air barrier or accept the need to overfly without permission. Both the JPS and the COS agreed that for *Vantage* air transport had performed well. The JPS echoed Elworthy in requesting the provision of suitable air-transportable anti-tank weapons for the Army and effective air transportable radar. They concluded that:

Operations Vantage was ..... a success in that its political objective, to deter an Iraqi attack on Kuwait, was achieved. It was also highly successful as a military exercise in that it fully tested, under operational conditions, our capability to concentrate an effective military force over considerable distances in a very short time. At the same time certain logistic weaknesses were disclosed which could have proven serious if fighting had started.<sup>43</sup>

In particular, the JPS were concerned that no artillery had been available within Kuwait until 4 July when the move of the Parachute Light Battery was completed. They noted that this deficiency would not have arisen had *Bulwark* been provided with its own artillery contingent. Nevertheless the COS approved the concluding remarks of the JPS that:

The success of this operation supports our current seaborne/airborne concept of limited war operations, in which full advantage is taken of the flexibility provided by both sea and air transport.<sup>44</sup>

The Royal Navy had played a leading part in this success. The first British troops and tanks ashore had been landed from the sea. The

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<sup>42</sup>. COS (62) 58. COS (62) 5 mtg, 16 January 1962; DEFE 4/142.

<sup>43</sup>. COS (62) 58.

<sup>44</sup>. COS (62) 58. COS (62) 5 mtg.

Navy provided radar cover and artillery support when none could be provided ashore. HMS *Meon* provided a vital communications link between Bahrain and Kuwait. It was not until the arrival of HMS *Victorious* that the air defence situation became adequate. Like *Musketeer*, *Vantage* demonstrated the central role of the aircraft carrier in limited war operations. A naval Commander-in-Chief might have stressed this point more strongly in his official report. The RAF could take comfort from the acknowledgements of the role of Transport Command and air transported forces. The cooperation of the Navy and RAF during *Vantage*, in conjunction with the Army, had shown the viability of the seaborne/airborne concept. Both Services could feel confident that their intervention capabilities would improve with the introduction of new equipment. Unfortunately, the development of these capabilities was to be the cause of conflict and not cooperation. This reflected the differing priorities that the Services gave to the development of national strategy compared with the preservation of their own capabilities.

## **CHAPTER EIGHT**

### **BRITISH STRATEGY IN THE SIXTIES**

Harold Macmillan's famous "*Winds of Change*" speech, delivered in Cape Town in February 1960, heralded a rapid process of British decolonisation in Africa. It did not indicate any desire for Britain to relinquish its world role. The Conservative government remained committed to the deployment of military forces outside Europe, particularly in the Indian Ocean region. In 1963 the Labour front bench reversed previous policy and accepted the world role and the commitment of forces east of Suez.<sup>1</sup> Operation *Musketeer* had shown that military bases overseas were often unavailable for use in a crisis. Libya, Jordan and Ceylon had all refused to allow Britain to use bases in their countries for operations against Egypt. The continuing withdrawal from Empire meant that Britain could not rely on the existing string of sovereign bases forever. By developing a modern amphibious capability, the Admiralty hoped to offer Britain the ability to deploy flexible military forces across the Indian Ocean with minimum reliance on overseas bases. The Air Ministry hoped to do the same by relying on air-transport and land based airpower, deployed from a limited number of island bases. A rivalry developed between the two Services as both sought acceptance for their own concepts of overseas intervention, and thus gain funding for their favoured projects. Although the RAF had not opposed Admiralty plans to expand their amphibious capabilities, the decision of the Admiralty to push for a new generation of aircraft carriers, built primarily for operations east of Suez, brought the Air Ministry into open opposition as the two Services competed for limited funding.

In 1960 the COS undertook a study of *Military Strategy for Circumstances Short of Global War* based on the conclusions of the Brook Committee on Future Policy. The conclusions of the study were discussed by the Chiefs and the Defence Committee and formed the basis for a later paper entitled "*British Strategy in the Sixties*". This COS report on strategy short of global war was based upon

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1. Darby, *British Defence Policy*, p.215.



political and financial assumptions, and general objectives laid down by the Prime Minister, Harold Macmillan. Macmillan directed that Britain would have to rely on all-regular forces of about 390,000 to 400,000 men. Annual overseas defence expenditure (excluding Germany) was to be reduced as soon as possible by £35 million. Britain would maintain an independent nuclear deterrent. He acknowledged that the tenure of overseas bases and facilities could not be relied upon and that similarly, increasing difficulty must be expected in securing staging and overflying rights from unsympathetic governments.<sup>2</sup>

Based upon the Prime Minister's directive the following criteria were adopted for strategy short of global war:

1. land forces would nowhere be engaged on a scale greater initially than a reinforced brigade group.
2. no major operation (up to brigade group level) would be undertaken in more than one theatre at a time, and not more often than once in a period of two years in any one theatre.
3. any period of intense fighting was unlikely to be prolonged, possibly a matter of weeks rather than months.

The final criteria had a direct bearing on amphibious warfare and deserves full quotation:

The circumstances in which our forces might have to intervene could vary from occasions when points of entry, and possibly local facilities, would be available to us to occasions when the points of entry would be in hostile hands, requiring us to face opposition to establish ourselves. We do not, however, believe that we would, at least without allies, attempt to intervene in the face of heavy opposition requiring us to mount a full-scale assault.<sup>3</sup>

Independent assault operations against heavy opposition were therefore discounted, although the requirement to be able to land on a hostile shore remained.

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<sup>2</sup>. COS (62) 1, **British Strategy in the Sixties**, remains closed to the public. However, it is possible to gain much of the information contained in this document from other sources, notably DEFE 7/2231, DEFE 7/2234 and DEFE 7/2235. For *Military Strategy for Circumstances Short of Global War* see PREM 11/2946.

<sup>3</sup>. COS (61) 499, 20 December 1961, digest report of COS (62) 1; DEFE 7/2235. COS (62) 49, 31 January 1961, digest of COS (62) 1; DEFE 7/2235.

In May 1961 an Admiralty presentation was arranged at the request of the Minister of Defence to outline the shape and cost of the Navy under the following circumstances: if Britain retained its current bases; if the Navy ceased to have an operational role east of Suez; and if the role east of Suez remained but no bases were available except those in Australia. Three alternative fleets were outlined, Fleets A,B and C respectively. Under Fleet A the Navy remained as currently projected, with four aircraft carriers (with three air groups), two commando carriers and two assault ships. Aircraft carriers were central to this fleet and it was considered that future carriers would have to be of about 50,000 tons in order to enable them to operate high performance super-sonic aircraft. It was accepted that there would be no role for aircraft carriers or amphibious ships in Fleet B and that the large carriers would not need replacing. The case for Fleet C offered the most demanding challenge to the Navy. With no bases east of Suez except Australia, the Admiralty proposed to deploy military strength from a Joint Services Seaborne Force. This force would be able to put ashore a balanced brigade group, against opposition if necessary. In order to ensure the permanent availability of the military force, two powerful amphibious groups would be required. This “*Double Stance*” approach would require a total of four commando carriers and four assault ships, two each to each of the amphibious groups. By rotating these ships a strong military force could be poised off a trouble spot almost indefinitely. In order to support these amphibious groups a total of six aircraft carriers were required, with four air groups ensuring the constant availability of two strike carriers to each amphibious group. The combination of strong military forces and powerful airgroups would give Britain the capability to bring pressure to bear in most conceivable trouble spots.<sup>4</sup>

In his concluding remarks the 1SL, Admiral Caspar John, was at pains to stress that the Joint Services Seaborne Force was an inter-Service concept and that he was not trying to claim that the Navy could “*go it alone*” . He wanted to develop a partnership with the other Services. In particular, he emphasised that he considered that sea and land based

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<sup>4</sup>. Presentation of Alternative Long Term Naval Programme, 17 May 1961; ADM 205/192.

air were complementary. He did not claim Britain could do without bases east of Suez but rather was trying to show that a seaborne strategy offered the means of making do with a reduced number.<sup>5</sup>

The COS study *British Strategy in the Sixties*, completed by the end of 1961, anticipated that Britain's major military role in the 1960s would be intervention in trouble spots in Africa and Asia.<sup>6</sup> The COS continued to believe that war in Europe was unlikely.<sup>7</sup> In order to make up for a likely reduction in overseas bases, forces would have to be flexible and mobile. West of Suez it was not intended to provide forces locally to meet possible operational commitments. Footholds would be maintained in the Mediterranean and Caribbean and reinforced from the United Kingdom as necessary. East of Suez reliance was placed primarily on theatre forces based at Singapore and the Persian Gulf. These forces would be capable of mutual reinforcement. For this purpose a fully effective Amphibious Group was to be provided. In order to ensure constant availability of the required shipping, and to maintain a tank force permanently poised at sea ready to intervene in Kuwait, it was recommended that both commando carriers and the two new assault ships should be maintained in commission east of Suez. The "*double stance*" strategy of two large amphibious task forces, each capable of mounting major operations, was considered the most desirable strategy for the next decade in view of the uncertain tenure of many of Britain's bases. Unfortunately, it was deemed to be beyond available resources. No specialist amphibious capability was required in the West.<sup>8</sup>

The "*double stance*" would have provided an effective, constantly available intervention force. Under this strategy an amphibious brigade group could be held off a trouble spot indefinitely. The combination of amphibious troops and carrier borne airpower would have been a very potent one. Had the "*double stance*" strategy been adopted it would have represented a new and very powerful capability for the Royal Navy. However, despite being accepted as the most desirable strategy for the future its expense ruled it out. With limited

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5. Ibid.

6. DEFE 7/2235.

7. Grove, *Vanguard to Trident*, p.249.

8. COS (61) 499. D (61) 1 mtg, 12 January 1962; CAB 131/27.

resources available to the defence budget, expensive ideal solutions were unlikely to be adopted.

The 1962 Defence White Paper reflected the decisions reached in *British Strategy in the Sixties* and enunciated the new concept of operations. The replacement of AWHQ and the Land/Air Warfare Committee by the Joint Warfare Committee was announced. The paper stated that:

We must insure against the loss of fixed installations overseas by keeping men and heavy equipment afloat, and by increasing the air and sea portability of the Strategic Reserve.

A fully effective joint Services amphibious task force was to be permanently maintained east of Suez for cold and limited war purposes. Amphibious warfare was now a central part of British strategy.<sup>9</sup> The Naval Estimates placed an even greater emphasis on amphibious capability which was identified as being at the centre of the balanced fleet. The primary role of the Royal Navy was now the conduct of amphibious operations in limited war:

The commando ships and the assault ships put ashore the spearhead of the land forces with their guns, tanks and vehicles. The aircraft carriers provide reconnaissance and tactical strike ahead of the landing; air defence for the seaborne force; and close support for the troops ashore - especially when this cannot be done, either adequately or at all, by land-based aircraft. Cruisers and escorts reinforce the air and anti-submarine cover, direct our aircraft and give warning of the enemy's and use their guns for bombardment if required. Submarines provide additional protection against hostile submarines and carry out reconnaissance and minelaying. The minesweepers clear a way to the land. The Royal Fleet Auxiliary tankers and store ships keep the whole seaborne force supplied.<sup>10</sup>

Admiralty enthusiasm for amphibious warfare is understandable. The great advantage of amphibious warfare for the Royal Navy was that in order to support an amphibious task force the full range of naval capabilities were required. Amphibious warfare capabilities justified

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<sup>9</sup>. Statement on Defence 1962: *The Next Five Years*; Cmnd 1639.

<sup>10</sup>. Explanatory Statement on the Navy Estimates 1962-1963; Cmnd 1629.

the maintenance of a large balanced fleet equally suited to operations against Soviet ships and submarines in the North Atlantic or limited war activities in the Indian Ocean. The 1962 Naval Estimates made no mention of any other role.

The Royal Marines had an important place in the new amphibious Navy. In 1956 the *Way Ahead Committee* had investigated the future of the Royal Marines. Consideration was given to proposals to abandon the Corps or to transfer it wholesale to the Army. These proposals were rejected. The Committee, calculating that there was a future for the Corps within the Royal Navy, directed the CGRM to make proposals on the future role, function and size of the Royal Marines. These proposals were endorsed by the Committee and accepted by the full Board of Admiralty in December 1961.<sup>11</sup> The CGRM recommended that the role of the Marines should remain basically unchanged, the provision of: detachments to serve in HM Ships; Royal Marine Commandos; landing craft crews and special boat units; personnel for such other services as the Board of Admiralty may require; and bands for HM Fleets and certain Marine and Naval shore establishments. He considered that by reorganising the Corps in the United Kingdom a fourth Commando could be raised without increasing the total manpower requirement. A brigade of two Commandos plus the brigade headquarters would then be deployed overseas, with two Commandos at home. Total manpower under the 88,000 man fleet would stand at 8,366, a reduction of 1,620 on the existing figure.<sup>12</sup>

In 1957 Sandys directed that the long term naval manpower requirement should include no less than 5,000 men employed on military and Commando purposes. This was a natural response to the Navy's increasing responsibilities in limited war. Sandys was also motivated by a desire to relieve the pressure on the Army which, with the decision to abandon National Service, was expected to experience recruitment problems. It was in these terms that he justified the increase in Naval manpower from 80,000 to 88,000:

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<sup>11</sup>. Board Minute 5071; ADM 167/146.

<sup>12</sup>. Memo B.1117; ADM 167/146.

The primary justification for raising the ceiling of the Navy and the marines is to provide additional military power to help in Imperial policing, internal security duties and limited war operations, in the event of the Army being unable to fully meet all its commitments<sup>13</sup>

In a similar manner, Harold Watkinson justified the requirement for improved amphibious lift on the grounds that he needed the extra mobility this would provide to counter balance the failings of Army recruitment.<sup>14</sup> The War Office was somewhat nonplussed by this attitude. The Army were quick to point out that there was no suggestion that they would fail to recruit satisfactorily for *teeth* arms. The recruiting problems would hit the supply and logistics organisation. The concept of using Royal Marines to replace Army units was thus misguided, as the Marines could only replace that type of unit which the Army was likely to have in sufficient strength anyway.<sup>15</sup> The Army suspected the Admiralty of seeking to build up the Royal Marines at their expense. In June 1957 the CIGS Sir Gerald Templer wrote to Mountbatten outlining the feeling of suspicion that had arisen over the issue. Noting the proposals that Royal Marines should be used in the place of Army units he wrote:

A feeling has sprung up, which, though it may be wrong, is there nevertheless, that this idea has perhaps been fostered by the Admiralty and that in consequence the Army will suffer greater damage and further loss of traditional units.<sup>16</sup>

One advantage of these fears was that they caused the Army to support the view that the Marines should be used primarily as a mobile amphibious force, and not be tied down in static garrison duties.<sup>17</sup>

The Royal Marines entirely agreed with this view. Anticipating no recruitment problems they were now planning on the basis of two Commando brigades. One brigade, consisting of a headquarters and three Commandos, would be based overseas, with the second brigade of two Commandos and a headquarters stationed in the United

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<sup>13</sup>. D (57) 28, 14 November 1957, memo by Minister of Defence; CAB 131/18.

<sup>14</sup>. See chapter six, page 191-192.

<sup>15</sup>. WO 216/927.

<sup>16</sup>. Folio 2; ADM 205/115.

<sup>17</sup>. WO 216/927.

Kingdom as part of the strategic reserve.<sup>18</sup> In 1958 the Admiralty presented their plans for the future deployment of the Commandos to the COS.<sup>19</sup> They outlined the Royal Marine proposals for two Commando brigades. Under the plan a fourth Commando would begin to form in April 1960, and the fifth in December 1962. With two Commandos in the UK, one Commando would be stationed with the AW Squadron, at this time still in the Mediterranean, while the remaining two Commandos would be linked to HMS *Bulwark* and stationed east of Suez. The Admiralty considered that a force of less than two Commandos would not give sufficient operational capability to justify the expense of the commando carrier.<sup>20</sup> The COS approved these plans in October 1958.<sup>21</sup> With recruitment buoyant, 41 Commando was raised in 1960, and 43 Commando was raised in 1961.<sup>22</sup>

By the 1960s the position of the Commando forces had changed. They were no longer intended primarily as raiding forces for use in major war. Although the Commandos retained responsibility for amphibious raiding, they now had an important role to play in limited war and cold war operations outside Europe. This called for some alteration in the composition of each Commando to enable them to meet the different challenges likely to be faced in this new role. In August 1961 the COS approved Admiralty proposals to increase the size of the Royal Marines by 500 men. Of these, about 350 were to go to the Commandos on a basis of one officer and 70 men to each of the five. These would provide each unit with an air control team and a naval gunfire support section, and would enable it to operate more support weapons. The remaining 150 men were to form two sets of Administrative Group Elements, one stationed either side of the Suez barrier. These Group Elements would include transport, medical and administrative facilities and were designed to relieve the burden on Army support facilities posed by the Royal Marines when operating ashore. It was recognised that it was neither practical nor economical for the Royal Marines to become entirely independent of the Army

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<sup>18</sup>. Folio 5; ADM 205/115.

<sup>19</sup>. COS (58) 219, 18 September 1958, memo by Admiralty; DEFE 5/85.

<sup>20</sup>. Ibid. Memo B.1222 + B.1223; ADM 167/152.

<sup>21</sup>. COS (58) 87 mtg, 15 October 1958; DEFE 4/112.

<sup>22</sup>. Moulton, *The Royal Marines*, p.121.

support apparatus when operating out of range of their parent ship. The Commandos would always need to look to the Army for some of its second and third line support. Despite the backing of the COS and the Minister of Defence, the Treasury were unwilling to sanction the expense which these extra men represented.<sup>23</sup>

The possibility of using the mobility and flexibility of the Royal Marines to make up for deficiencies in Army recruiting continued to prove attractive to the Ministry of Defence. At a Defence Committee meeting in October 1961, Watkinson advocated the raising of a further (6th) Commando as an insurance against Army recruiting difficulties. The Defence Committee approved this proposal but as the Chancellor of the Exchequer, Selwyn Lloyd, had not been present at the meeting he refused to be bound by the decision.<sup>24</sup> Royal Marine recruiting had increased to a healthy 900-1000 per annum with high re-engagement rates, however it was considered unlikely that a sixth Commando could be trained and operational before early 1965. Under these circumstances the Minister of Defence was advised by Mountbatten to concentrate first on gaining approval for the additional 500 men. Treasury approval for these men was forthcoming at a meeting held on 23 October and the decision to increase Royal Marine manpower by 500 was announced in the 1962 Navy Estimates.<sup>25</sup>

The Commando organisation was reformed to enhance flexibility and striking power. Each Commando now consisted of 680 men, organised into three rifle companies of 109 men, a support company, an anti-tank troop, a heavy weapons troop and a headquarters company. The strength of the Commandos was further enhanced by the embarkation in the commando carriers of 105mm pack howitzers which for the first time provided the Commandos with their own integral fire support. The provision of such support had been one of Air Marshal Elworthy's recommendations in his report on *Vantage*. In 1962 29 Regiment, Royal Artillery embarked in *Albion*, becoming 29 Commando Light Regiment, Royal Artillery. The 29 Regiment was followed by the 95 Regiment which embarked in *Bulwark* as 95

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<sup>23</sup>. COS (61) 50 mtg, 3 August 1961; DEFE 4/137. Folio 25 + passim; DEFE 7/1681.

<sup>24</sup>. Folio 26 + 41; DEFE 7/1681.

<sup>25</sup>. Folio 41; DEFE 7/1681. **Explanatory Statement on the Navy Estimates 1962-1963.**



Commando Light Regiment, Royal Artillery.<sup>26</sup> These reforms gave the Commandos more staying power and greater offensive potential, increasing their value for use in limited war as opposed to the raiding operations for which they had originally been designed.

The Admiralty's first priority in 1962 was to ensure support for its maritime strategy based upon the amphibious task force. In January 1962 the VCNS, Vice-Admiral Varyl Begg, submitted a minute to Caspar John outlining the necessity of obtaining Army support for this strategy. He noted that in order to gain their support the Admiralty would have to convince the War Office that this strategy was not just a cover to gain more ships and more Royal Marine Commandos. Varyl Begg feared the creation of an "*unholy alliance*" between the War Office and the Air Ministry in opposition to Admiralty plans. He recommended disbanding one Royal Marine Commando and inviting the War Office to organise two battalions as Army Commandos. This would tie the Army firmly into the maritime strategy and would allow for a redistribution of Royal Marines into ships detachments, increasing the overall flexibility of the Fleet. The Director of Plans supported these proposals. VCNS discussed the issue with the Vice and Deputy CIGS in February. He was informed that the Army had no desire to form Commandos of their own but was left with the firm impression that the War Office viewed the provision of five Commando with some misgiving, regarding it as an expansion at the expense of the Army.<sup>27</sup>

The CGRM, Lieutenant-General Cartwright-Taylor, was opposed to any reduction in the number of Commandos, particularly at the behest of the War Office. On 9 April he informed VCNS of his views:

I do not believe that the War Office will become more sympathetic to the Corps, or the navy, as a result of our agreeing to abolish one of our operational Commandos overseas. I think they would interpret this as a sign of weakening and might take it as encouragement to them to make further inroads into the rightful responsibilities of the marines.

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<sup>26</sup>. Neillands, *By Sea and Land*, p.322-323.

<sup>27</sup>. ADM 205/185.

Cartwright-Taylor considered that the Commando role was now the basic *raison d'être* of the Corps. He objected strongly to a situation where the strength and deployment of the Royal Marines could be directed by the “*whims*” of the Army.<sup>28</sup>

The vital importance of securing War Office support in Whitehall overrode the objections of the Marines. In addition, the Board of Admiralty was keenly aware that if agreement was not reached, the War Office could counter-attack with a bid to take over the Royal Marines entirely. CGRM was instructed to prepare counter arguments to such a bid but the Admiralty considered that their overall position was somewhat weak.<sup>29</sup> Bowing to War Office pressure, the Admiralty concluded a deal which put the active Commandos under Army command when they were ashore and agreed to the reduction of one Commando in due course.<sup>30</sup> In January 1963 the Admiralty submitted proposals to the COS outlining a requirement for only four Commandos: two overseas and allocated to the commando carrier, with one operational and one training commando based in the UK.<sup>31</sup> The COS took note of this paper but did not forward the conclusions to the Minister of Defence.<sup>32</sup> It did not take the Admiralty long to begin regretting the agreement. It had been driven entirely by the need to placate the War Office. By October 1963 Vice Admiral Frewen, Varyl Begg's successor as VCNS, considered that the agreement with the Army was “*a thoroughly bad one for the country*”. There was a general feeling that the Royal Marines were being “*mucked about*”. In a brief to Caspar John, Frewen and Cartwright-Taylor noted that:

The paradox now is that when the fifth Commando is reaching full strength and when the Minister is calling for a sixth Commando, we and the War Office are about to carry out a self-imposed agreement to reduce the number of active Commandos from five to three.<sup>33</sup>

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<sup>28</sup>. Ibid.

<sup>29</sup>. Board Minute 5563; ADM 167/160.

<sup>30</sup>. ADM 205/191.

<sup>31</sup>. COS 1/63, 3 January 1963, memo by Admiralty; DEFE 5/134.

<sup>32</sup>. COS 3mtg/63, 15 January 1963; DEFE 4/151.

<sup>33</sup>. ADM 205/191

In 1964 a new deal was struck which addressed this problem. The Army accepted the maintenance of five Royal Marine Commandos, with three based east of Suez. In return the Navy acknowledged that the Marines were specialist assault troops, and that while they were also trained as conventional infantry they were less suited to this role than infantry battalions. It was agreed that it would be wrong to make infantry battalions redundant by using Commandos in a purely land role, or to make Commandos redundant by excessive employment of infantry at sea.<sup>34</sup> An increasingly bitter battle was being waged within Whitehall between the Air Force and the Navy, both pressing for acceptance of their own concepts for intervention east of Suez. The Admiralty could not afford to alienate the War Office by being seen to be trying to “*go it alone*” with their plans for amphibious intervention forces. The agreement reduced Army fears that the Marines were expanding at their expense, while avoiding the need to disband the fifth Commando. With the future of the Navy’s aircraft carriers in the balance, the loss of the sixth unit was a concession the Admiralty were willing to make.

According to the Admiralty’s May 1961 presentation to the Minister of Defence, only if the Fleet was to have no operational role east of Suez would there be no requirement for aircraft carriers.<sup>35</sup> The COS study, *Military Strategy for Circumstances Short of Global War*, had recommended the permanent deployment of two carriers east of Suez. The Defence Committee initially rejected this, preferring the existing deployment of only one.<sup>36</sup> Nevertheless, in 1962 it was decided to maintain two carriers east of Suez and following the deployment of the second ship, one carrier was usually maintained within seven days steaming of potential trouble spots in the Middle East or Far East.<sup>37</sup> The Board of Admiralty continued to see aircraft carriers as central to the future of the Fleet, although not unanimously so. VCNS Varyl Begg questioned the utility of large vulnerable carriers, which took up a large part of the Navy’s resources. He wondered whether some tasks at present performed by carriers might be performed more

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<sup>34</sup>. COS 133/64, *The Royal Marines and the Requirement for Royal Marine Commandos*, 15 April 1964; DEFE 5/150.

<sup>35</sup>. ADM 205/192.

<sup>36</sup>. D (61) 28, 16 May 1961, memo by the Minister of Defence; CAB 131/25.

<sup>37</sup>. Mountbatten to C-in-C Far East + Middle East; ADM 1/29638.

cheaply by other means. This was not the unanimous view of the Board and both Caspar John and the First Lord, Lord Carrington, were firmly behind the requirement for carriers.<sup>38</sup>

The Air Ministry was naturally reluctant to endorse the role of the aircraft carrier in limited war. They considered that the air support of the Army east of Suez was an RAF and not a Naval responsibility. Acceptance of a new generation of aircraft carriers would simultaneously strain the defence budget and undermine the role of the RAF east of Suez, opening it up to further cuts. The CAS, Air Marshal Tom Pike, submitted a memorandum to the COS arguing against relying solely on seaborne forces east of Suez. He was anxious to have it accepted that Britain could only conduct small scale operations, operations relying primarily on air transport. He considered that with the development of vertical take off and landing (VTOL) and short take off and landing (STOL) technology the aircraft carrier of the future should be a multi-purpose ship similar to the existing commando carriers. Such a ship could be used, according to requirements: for the conveyance of troops; as a platform for ASW aircraft and defensive fighters; or as an advanced landing ground with limited servicing facilities for land based close support and fighter aircraft.<sup>39</sup> It would lack the capabilities of a true aircraft carrier.

A joint Admiralty/Air Ministry study group was set up to examine the proposals for a dual-purpose carrier. The CAS viewed this ship as in essence a temporary home for land based aircraft. Under these conditions he considered that the Fleet Air Arm would cease to exist. The squadrons concerned would be provided by the RAF and would consist of both Royal Navy and RAF aircrew, with RAF ground crews ashore and Naval crews afloat. The RAF would be responsible for all training. This harked back to the policy adopted between the wars when the Navy had been responsible for the carriers, and the RAF was responsible for the embarked aircraft. This had been a wholly unsatisfactory arrangement and entirely to the detriment of seaborne airpower.<sup>40</sup> Aware of the sensitivity of this issue, Pike warned his

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<sup>38</sup>. Board Minute 5468; ADM 167/158.

<sup>39</sup>. COS (61) 358, 29 September 1961, memo by CAS; AIR 8/2328.

<sup>40</sup>. Geoffrey Till, *Air Power and the Royal Navy 1914-1945. A Historical Survey*, (London: Jane's Publishing Company, 1979) passim.

subordinates not to raise the future of the Fleet Air Arm with the Admiralty.<sup>41</sup>

The study group considered a vessel capable of operating 24 VTOL/STOL aircraft based on a hull ranging in size from 35,000 tons to 40,000 tons. In all cases the vessel would be far less capable than a fleet carrier. Caspar John saw little merit in this dual purpose carrier, dubbed the *Pike ship*. He noted that such a ship would be much bigger and costlier than was necessary for the commando role and that as an aircraft carrier it would be entirely inadequate. He considered that the idea was a “*non-starter*” :

in their basic role this carrier and its aircraft would not be a viable military unit; they could not “*ensure the safe and timely arrival of a seaborne military force*” ; they could not even provide their own effective fighter defence; they would be strictly an adjunct to an indefinite number of conveniently placed shore bases.

He was not slow to point out that the availability of these shore base could not be relied upon.<sup>42</sup>

By the end of November 1961 Pike was forced to concede that the joint study group was unlikely to reach agreement on the basic concept for the dual purpose carrier. He emphasised that the Air Ministry considered this ship to be preferable to expensive fleet carriers which, given the capabilities of shore based aircraft, were not required for the kind of operations Britain was likely to undertake.<sup>43</sup> John disagreed:

I conclude that in the 1970s and 1980s carriers will continue to be vital to the strategy of this country as mobile air bases for the provision world-wide of a military presence as a deterrent to limited war; for the protection of seaborne forces and for the provision of the air support required by the Army overseas.<sup>44</sup>

The Air Ministry and the Admiralty could not agree on the dual purpose carrier concept as essentially they differed on the role of

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<sup>41</sup>. Aide memoir setting out Pike's views, 11 October 1961; AIR 8/2328.

<sup>42</sup>. John to Pike, 23 November 1961; AIR 8/2328.

<sup>43</sup>. Pike to John, 28 November 1961; AIR 8/2328.

<sup>44</sup>. COS (61) 475, 5 December 1961, memo by ISL; AIR 8/2328.

carrier borne airpower. The RAF considered that, given the limited potential of Britain's likely opponents east of Suez and the high performance of shore based RAF strike and bomber aircraft, it would be possible to reduce air opposition to any operation to a very low level. The main air defence of a seaborne convoy would be provided by an attack on enemy airfields conducted by shore based aircraft. The residual threat which the carrier would have to cater for would thus be small, and in this role its VTOL aircraft would be supported by the surface to air missiles of escorting ships. During the assault phase land based aircraft would be responsible for keeping any remaining air threat in check. In this way the aircraft of the dual purpose "*close support*" carrier would be freed for close support, reconnaissance and interdiction duties. Under these conditions Britain's intervention capability would be limited to those areas and those opponents against which land based airpower could be effectively brought to bear.

The Admiralty, on the other hand, believed that the role of the aircraft carrier was "*to provide air support of land and maritime forces in places or at times when shore based aircraft cannot do so, either adequately or at all*". They doubted the ability of shore based aircraft to do all that the RAF claimed of them, and were alive to the possibility that a forced reduction in overseas bases for political reasons could undermine the ability of such air power to provide adequate cover. The Admiralty therefore envisaged the next generation of carriers having the full capabilities of a large fleet carrier.<sup>45</sup>

As the Admiralty and Air Ministry were unable to reach agreement, the COS decided to refer the issue to a neutral party: Field Marshal Festing. Festing examined the case and came down in favour of the specialist carrier:

The minimum requirement is for an aircraft carrier which can provide air defence for an amphibious task force and a measure of initial close support for the troops when put ashore. For this purpose, something approximating to the light fleet carrier in displacement, cost and aircraft carrying capacity would be sufficient.

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<sup>45</sup>. Ibid.

He rejected proposals to combine the capabilities of the commando carrier and the aircraft carrier in one ship. Further, Festing doubted the requirement for sophisticated aircraft such as the RAF TSR.2. He considered that a single type of aircraft should fill the light bomber and strike/fighter roles east of Suez, whether the aircraft were sea or shore based. He recommended abandonment of the TSR.2 project and the adoption of the Navy's Buccaneer 2 as the common aircraft.<sup>46</sup> Festing had first hand experience of the value of aircraft carriers in support of amphibious operations as he had commanded a brigade during Operation *Ironclad*, the invasion of Madagascar in 1942. Air support for *Ironclad* had been provided exclusively by the fleet carriers, HMS *Illustrious* and *Indomitable*.

On 13 December, in a memo to the CDS, Lord Mountbatten, the CAS reluctantly admitted defeat. He noted that he continued to believe in the dual purpose carrier, "[however] *I do not wish to press this point any further because it is quite clear that I am alone in this thinking*". The outline of future battles was drawn, as Pike questioned the feasibility of developing an aircraft which could provide for close support, air defence, reconnaissance and long range strike. He considered that the first three were possible in one aircraft, but not the requirement for long range strike, he argued that the Admiralty should abandon this role.<sup>47</sup>

The hulls of all the existing aircraft carriers had been laid down during the war. *Victorious* was the oldest ship and would reach the end of its useful life in 1970. In order to replace that ship by then, work on a replacement was required immediately. *British Strategy in the Sixties* included £120 million in its costings for the construction of aircraft carriers which would commission after 1970. These carriers were intended primarily for cold and limited war tasks, although they would be allotted a role in global war. The ships were not intended as "*capital ships*" as such, but rather as "*floating airfields*" capable of operating both Royal Navy and RAF aircraft.<sup>48</sup>

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<sup>46</sup>. Future Air Strike Policy in Limited War Outside Europe, memo by Festing; AIR 8/2328.

<sup>47</sup>. CAS to CDS, 13 December 1961; AIR 8/2328.

<sup>48</sup>. D (62) 1 mtg, 12 January 1962; CAB 131/27.

The future requirement for aircraft carriers to “*provide floating airfields from which British air power can be operated irrespective of whether this power is provided by the Royal Air Force or the Fleet Air Arm*” was endorsed at a private meeting of the COS on 14 December. The proposal to combine the role of commando carrier and aircraft carrier in one ship was specifically ruled out. In order to provide the maximum flexibility for future air complements, it was agreed that replacement carriers would be approximately the same size as HMS *Ark Royal*. The COS also agree that as soon as possible a joint RAF/Naval aircraft should be provided to fill the requirements of fighter, ground attack, strike and reconnaissance. In order that RAF crews should be able to operate from aircraft carriers without constant practice in such operations these aircraft would have to be either VTOL or V/STOL (vertical/short take off and landing). It was aimed to provide the aircraft by 1975-1977. As an interim step an effort was to be made to produce a common fighter/ground attack aircraft with a supersonic performance on the lines envisaged in the NATO requirement NBMR 3. Such an aircraft would have a limited strike capability, with a radius of action restricted to about 400 nautical miles. However, it would provide a carrier borne supersonic fighter earlier than was otherwise likely. It was thought that this aircraft could be introduced into service in about 1969/70.<sup>49</sup> In January 1962 the Defence Committee authorised initial design work to be undertaken for a replacement of HMS *Victorious*. This decision did not represent authority to actually build the ship.<sup>50</sup>

The Admiralty undertook a number of design studies to determine the size and shape of the new carriers. The American *Forrestal* class ships and the French carriers *Clemenceau* and *Foch* were looked at. The former was too expensive whilst the latter were considered too unstable and were too small to embark the necessary size and number of aircraft.<sup>51</sup> In all about 40 studies were made. Serious attention was given to four designs, catering for ships of 58,000 tons, 55,000 tons, 53,000 tons and 52,000 tons, see Table One.

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<sup>49</sup>. CDS/P(61) 12 mtg, 14 December 1961; AIR 8/2354.

<sup>50</sup>. D (62) 2 mtg, 31 January 1962; CAB 131/27.

<sup>51</sup>. Memo B.1414; ADM 167/154.



**Table One: Design studies for a new aircraft carrier**

<b>Design Study N.58</b>	A ship of 58,000 tons capable of operating 40 fighter/strike and 4 AEW aircraft plus 2 SAR helicopters. Costing between £60 and £65 million.
<b>Design Study No.55</b>	A ship of 55,000 tons capable of operating 30 fighter/strike and 3 AEW aircraft plus 2 SAR and 5 ASW helicopters. Costing between £58 and £63 million.
<b>Design Study No.53</b>	A ship of 53,000 tons capable of operating the same complement as the No.55 but with inferior machinery. Costing between £55 and £60 million.
<b>Design Study No.52</b>	A ship of 52,000 tons capable of operating 32 fighter/strike and 4 AEW aircraft plus 2 SAR helicopters. Costing between £55 and £60 million.

In June 1962 the Board accepted Design Study No.53 as the best compromise between capability and expense. As a ship of this size would be too big to dock in any existing Royal Dockyard without major works, the Ship Characteristics Committee recommended that a new dock should be built at Portsmouth to accommodate this ship. The existing dock at Portsmouth was already too small to accommodate either *Eagle* or *Ark Royal*.<sup>52</sup>

Aware of political considerations, the Civil Lord, Ian Orr-Ewing, considered that a smaller carrier of about 40,000 tons and capable of carrying 24 aircraft should be considered as this would stand a better chance of seeing the construction programme completed. He noted that the introduction of VTOL aircraft might allow the air group to be increased. Caspar John represented the majority opinion when he said that to adopt a “*second rate design*” would be short sighted, particularly as these ships would have to operate three generations of aircraft during their lifetime. Carrington was later to claim that he

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<sup>52</sup>. Memo B.1421; ADM 167/160.

favoured a smaller carrier but there is no evidence to show that he expressed this opinion to the Board. With the exception of the Civil Lord who dissented, the Board approved Design Study No.53 and agreed that the case for this ship should be presented on a broadly inter-Service basis and not as a purely naval interest. It was decided that the price must be held at £50 to £60 million and that additional equipment and weapon systems that threatened to increase costs could not be accepted.<sup>53</sup>

Despite the agreement of the COS on 14 December 1961 the question of aircraft carrier replacements remained a lively one. The RAF saw the tactical strike role as exclusively their own, and continued to attack the need for aircraft carriers to have this capability. In September 1962 Carrington submitted a paper to the Minister of Defence, Peter Thorneycroft, stressing the future role of carriers and the problems of relying on shore based airpower.<sup>54</sup> At this time the RAF were unwilling to engage in heated argument with the Admiralty. Both VCAS and his Private Secretary advised Pike to avoid controversy, but to quietly give Thorneycroft as much indirect support as possible in his critical scrutiny of Carrington's paper. Air Commodore Major suggested adopting a "*more in sorrow than in anger*" approach, believing that lack of money would do the talking when Thorneycroft came to consider the Admiralty's case.<sup>55</sup> Accordingly, on 4 October Hugh Fraser, the Secretary of State for Air, sent a rather subdued note to the Minister of Defence acknowledging Carrington's paper.<sup>56</sup> Thorneycroft had resigned from his post as Chancellor of the Exchequer in 1958 because of Macmillan's failure to endorse his proposals to cut back on public expenditure. While on the backbenches he had remained a firm supporter of tight fiscal policy.<sup>57</sup> The Air Ministry may have hoped that, given this history, Thorneycroft would naturally oppose expensive aircraft carriers. If so, they were to be disappointed.

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53. Board Minute 5535; ADM 167/160. Carrington, *Reflect on Things Past*, p.161.

54. *Carriers and National Commitments in the 1970s*; AIR 8/2354.

55. Minute by Air Commodore Major, 11 September 1962; AIR 8/2354.

56. Fraser to Thorneycroft, 4 October 1962; AIR 8/2354.

57. Alistair Horne, *Macmillan 1957-1986: Volume Two*, p.70-79.

At the request of Thorneycroft, Hugh Fraser submitted a second paper on 18 October, this time outlining the Air Ministry's concept of the *Island Stance*.<sup>58</sup> This strategy was primarily inspired by the dual constraints of economic pressure on the defence budget, and political pressure overseas which made future tenure of bases and transit facilities uncertain. According to Fraser:

The so-called island strategy is simply a logistical concept of island airfields to enable us to avoid restrictions on the employment of our existing rights and facilities.

The basis of the concept was that the UK would be the only complete base for waging war, but that retention of certain secure island airfields would allow Britain to retain a limited ability to intervene east of Suez. The concept rested primarily on the use of long range air power and air transported troops. The Air Ministry was shrewd enough to stress that this concept was in no way an attempt to dispense with naval forces. They considered that there would be a continuing need for submarines and escort cruisers in addition to logistic ships. Aircraft carriers and amphibious assault ships did not figure in this concept. Fraser considered that with some stockpiling east of Suez the planned strategic airlift would be capable of lifting a brigade group at fighting scales. Air cover for military operations would be provided by land based TSR.2 and P.1154 aircraft. The new strategy was capable of continuous development from current planned deployment to the fully developed Island Stance. The first stage, the development of island staging posts, would in any case be required to ensure a politically secure reinforcement route to Singapore and Aden. Should it become clear that Britain would in future be denied the use of these bases, then alternative mounting bases could be developed.

The Island Stance provided for an intervention of a parachute battalion and an infantry brigade group less tanks. Assault operations would be limited to a battalion assault as only the parachute troops would be trained for airborne landings. Similarly, any assault operations would be limited in range to within the operating distance of the short range transports from which the troops could land. The

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<sup>58</sup>. Fraser to Thorneycroft, 18 October 1962; AIR 8/2354.

## Map One. The Island Stance

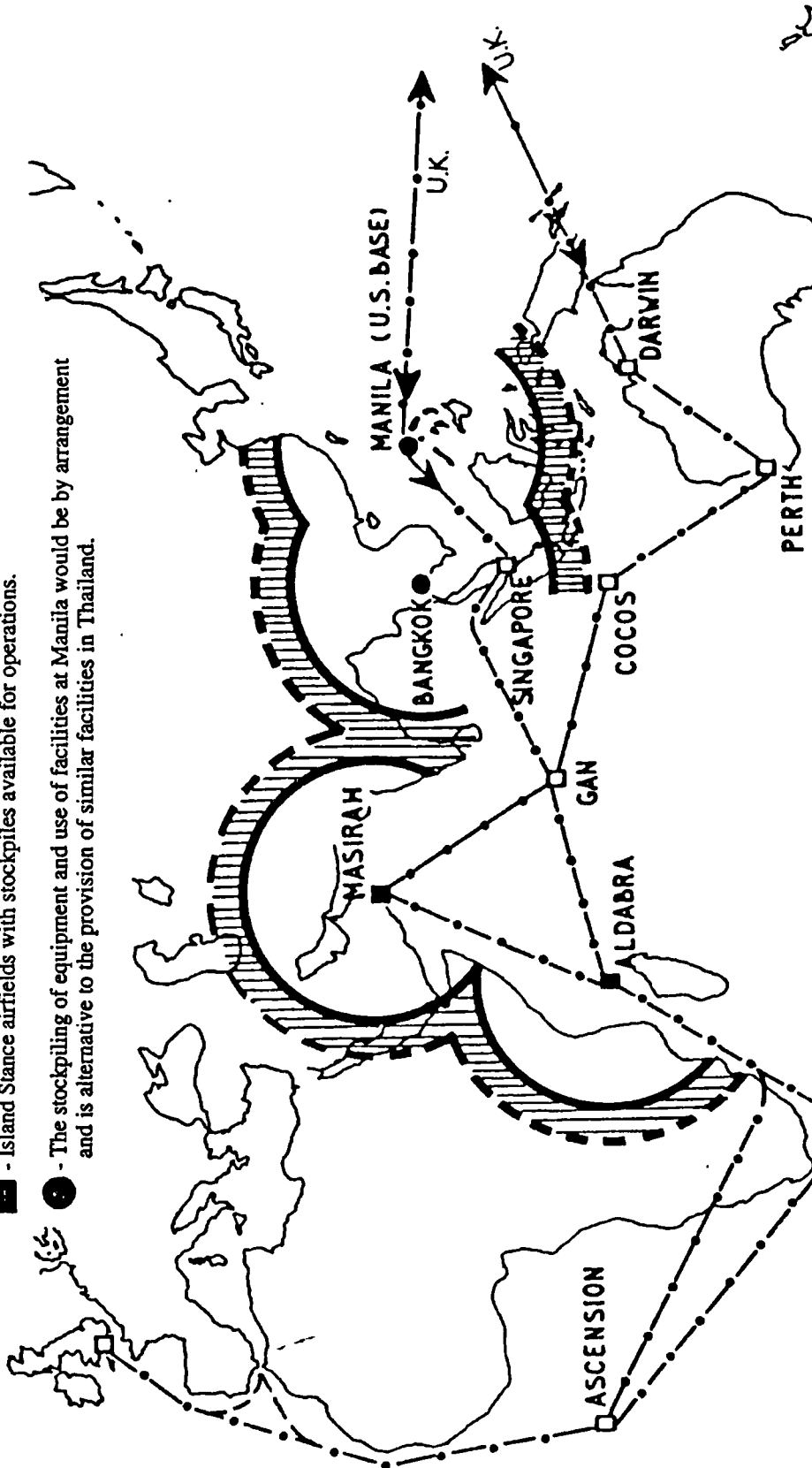
— P. 1154 combat radius 1000 nautical miles.

— TSR.2 combat radius 1250 nautical miles (can be extended by inflight refuelling).

□ - Island Stance airfields. Singapore is shown for possible use "on invitation" by Malaysia. Cocos is required if there is a base in Australia.

■ - Island Stance airfields with stockpiles available for operations.

● - The stockpiling of equipment and use of facilities at Manila would be by arrangement and is alternative to the provision of similar facilities in Thailand.



military forces would be deployed in the UK along with their light scales. Heavy equipment was to be stockpiled east of Suez. Small detachments of troops and tactical transport would be maintained at island bases to form a small rapid intervention capability. RAF strategic and tactical transports would be based in the UK and the TSR.2 squadrons would be based there and in Cyprus. These aircraft could concentrate rapidly east of Suez in response to a crisis. It was originally intended that the P.1154 aircraft would also base west of Suez but it was later conceded that their limited range would preclude their deployment east in a crisis and so it was accepted that they would have to be retained in theatre.

Staging posts would be required at Ascension, Gan and Aldabra. A staging post would also be required at Cocos if Australia was used as a base. Aldabra was to be developed as a base suitable for mounting internal security operations. Masirah was to be more extensively developed as a mounting base to service fighting scale operations, capable of supporting virtually the whole task force at once. A stockpile would be maintained either in Thailand or at Manila and use of facilities there would be sought for SEATO purposes, see Map One. The Air Ministry anticipated that with four days warning a force of one parachute battalion and one infantry battalion could be deployed to an airhead within 1,000 miles of the nearest base in ten and a half days. Long range strike aircraft were to reduce the enemy air threat to very small proportions prior to the initial assault. Following this P.1154 aircraft with drop tanks and in flight refuelling would provide what air defence and ground attack support was still required, backed up by hand held infantry weapons. Immediately following the assault, a squadron of P.1154s would be flown to the airhead and these would be joined by air mobile early warning and control radar as quickly as possible.<sup>59</sup>

On 27 November the CAS submitted a paper to the COS attacking the carrier programme. He stressed the vulnerability of these ships and questioned their ability to meet the requirements of rapid intervention. Pike echoed Fraser when he claimed that the planned strategic airlift

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<sup>59</sup>. Ibid. Briefing notes on the Island Stance, from D.Air Plans to VCAS; AIR 8/2354. Also see AIR 20/11425.

would be capable of delivering a brigade group, with air support, 1,000 miles forward of a mounting base and of supporting it there for a month. Sea supply was to have a place, but would not be relied upon absolutely:

I foresee....a break away from reliance on sea supply for all but the most protracted operations; but even in these there will be no valid case for carriers.<sup>60</sup>

The Air Ministry case rested on the belief that only operations of limited scope against weak opposition could be undertaken. They rejected the requirement to cater for more ambitious undertakings.

The Island Stance concept had a number of weaknesses. It could provide only a very limited intervention capability. The assault was limited to one parachute battalion, operating without tanks or heavy artillery support and possibly at the extreme range of land based air cover. Unlike at Port Said in 1956, there would be no amphibious assault force steaming inshore to relieve them should the going get tough. This force would be too weak to take on anything but the most insignificant opposition. Experience during Operation *Vantage* had shown that, even with an airfield on site, continuous air cover and support could not be relied upon. Without such cover lightly equipped air transported troops would be extremely vulnerable to enemy counter-attack. No commander could lightly contemplate putting such a weak force into action against organised opposition 1,000 miles from support and reinforcement. Should the paratroops encounter unexpected opposition, or more particularly should they fail to seize an airfield in the initial stages of the operation, they would find themselves stranded 1,000 miles from the nearest base, running out of food and ammunition and, unlike an amphibious force, with no means of re-embarkation and escape. The strategy could also be questioned on political grounds. Although Ascension and Aldabra were sovereign British territories and Cocos was the property of the Australian government, both Gan and Masirah were leased properties and thus subject to the same potential restrictions and difficulties as the bases which the Island Stance sought to replace. Even with the full range of bases and staging posts the Island Stance gave cover to a fixed

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<sup>60</sup>. COS (62) 457, 27 November 1962, memo by CAS; DEFE 5/132.

and geographically limited area. The loss of only one of the airfields due to political pressure would have undermined the entire system. It lacked the capability and the flexibility offered by an amphibious task group supported by an aircraft carrier.

The one key advantage of the Island Stance was its cost. In November 1962 a combined Admiralty/Treasury/Ministry of Defence costing estimated that the cost of a programme of four 53,000 ton aircraft carriers plus their aircraft would be £620 million, with each individual carrier costing £58 million. If increased Ministry of Aviation research and development was also included the price was nearer to £700 million and if the *Buccaneer* replacement was taken into account the capital cost might reach £800 million by 1980.<sup>61</sup> Against this the Air Ministry estimated that their Island Stance would cost between £30 and £40 million to set up.<sup>62</sup> This was not a reliable figure as it had not been independently scrutinised. This was not the fault of the Air Ministry. The Admiralty were well aware that a full and fair costing of the Island Stance would exceed the Air Ministry's estimate but that it would certainly fall well short of £620 million. Under such circumstances, it was better to allow the Air Ministry to underestimate the costs of their strategy and to deny them the legitimacy that independent costing would bring. The Air Ministry on the other hand claimed they would welcome an independent costing. Faced with the opposition of both Mountbatten and Thorneycroft they were denied the opportunity.<sup>63</sup>

Caspar John submitted his response to this strategy on 10 December. He highlighted the flaws in the Air Ministry case. He stressed that Britain could not discount the possibility of meeting opposition which would require armour and other heavy equipment. An island base strategy would leave Britain bound to these bases and would preclude the flexibility required to contend with unforeseen contingencies. In particular, he doubted the ability of air power alone to sustain and support operations on the scale suggested by Pike. As pre-emptive air strikes were often politically unacceptable, he noted that any

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<sup>61</sup>. DEFE 7/1804.

<sup>62</sup>. COS 25/63, 17 January 1963; in AIR 8/2354.

<sup>63</sup>. Private Secretary to CAS, 7 November 1963; AIR 8/2354. Thorneycroft to CAS, 27 March 1963; DEFE 25/40. ADM 205/194.

intervention was likely to have to cater for at least a moderate air threat and that this would have to be met by an existing airfield on the spot. In other words, by an aircraft carrier. In his view a brigade group could certainly be lifted and supported 1,000 miles from its mounting base, but this could only be considered a movement exercise and certainly not an operation of war. As regards cost he was quick to point out that the total cost of the Navy's Buccaneer force would be £7.7 million spread over 15 years compared to £28.75 million over 12 years for the RAF's TSR.2. Finally he rejected the CAS's claim that the carrier was particularly vulnerable: "*In a properly constituted force it is hard to pinpoint, hard to hit, and even if hit, extremely hard to disable*".<sup>64</sup>

Caspar John's appreciation differed fundamentally from that of the Air Ministry. He advocated maintaining a flexible intervention capability, able to respond to unforeseen circumstances. Unlike the Air Ministry, he did not reject the possibility of landings requiring a balanced military force which could only be supplied by a combination of air and seaborne forces. He saw no alternative to aircraft carriers for the flexible deployment of tactical air power worldwide and concluded that the carrier programme should go ahead. Rather than trying to economise by cutting the carrier programme he advocated effecting economies "*by making seaborne and land-based air power truly complementary*".<sup>65</sup>

In January 1963 Carrington forwarded a paper to Thorneycroft outlining the Admiralty's views on the Island Stance. The paper, prepared by VCNS Vice Admiral Frewen, considered that the strategy failed as a valid concept on three major grounds: those of strategic reality, political feasibility and military practicality.<sup>66</sup> The strategy was not realistic because it was inflexible. Being tied to static bases it would be unable to adapt to meet new threats in different areas. Designed only to meet current commitments, the strategy did not provide the world-wide military options needed to match changing circumstances. The political feasibility of operational bases overseas

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<sup>64</sup>. COS (62) 376, 10 December 1962, memo by ISL; DEFE 5/132.

<sup>65</sup>. Ibid.

<sup>66</sup>. Carrington to Thorneycroft, 9 January 1963; AIR 20/11423.



was also questioned. Facilities in Masirah, Aldabra and Thailand were vital to the strategy. The continued use of facilities at Masirah after a withdrawal from Aden was at best doubtful, likewise the willingness of Thailand to allow Britain to develop a stockpile there was questionable. Frewen anticipated that any move to develop facilities in Aldabra would provoke a hostile reaction among Afro-Asian nations and would be interpreted as a threat to the newly independent East African countries. This might result in increased Chinese or Russian influence in the region.

The VCNS pointed out that the military feasibility of going into battle at ranges of up to 1,000 miles was untried and was dependent on there being no worthwhile opposition in the air. The vulnerability of transport aircraft dictated that any airborne assault would require undisputed command of the air. This could not be ensured unless the force was protected by fighters and ground attack aircraft. Fighters were required to stop enemy air attack and ground attack aircraft were necessary to subdue anti-aircraft fire. Long range interdiction was not sufficient on its own:

Even if (which is unlikely) political approval were to be forthcoming for long range interdiction strikes in advance of a landing, these could not by themselves be expected to establish command of the air in the landing zone. During a period of tension, a potential opponent could withdraw his air squadrons to airfields remote from Island Bases. Alternately, in the future, with VTOL aircraft which can readily be dispersed, the effectiveness of interdiction strikes would be largely nullified; moreover, it should not be overlooked that current intelligence shows that Egypt, Iraq and Indonesia, for example, are all acquiring surface to air guided weapons for point defence of towns and airfields.

In the absence of carriers, fighter/ground attack aircraft could not be flown forward to the landing zone in any state of readiness, nor could a radar environment be established. Even under the most favourable conditions, with four days warning, it would still take between eight and ten days to undertake the unopposed airlift of a brigade group 1,000 miles forward. There was little difference between this figure and the reaction time for a seaborne lift. The air transported troops would have the additional disadvantage of arriving unacclimatised.

With few land and air forces permanently based in the theatre the strategy would also lack the physical deterrence associated with seaborne forces. Frewen stressed that the Admiralty did not advocate a purely seaborne strategy anymore than it could accept a purely airborne one. They considered air and naval power as complementary; the one balancing the weakness inherent in the other.<sup>67</sup>

At the request of Thorneycroft, a panel of scientists had been set up in September 1962 to consider the relative merits of the Island Stance policy and the aircraft carrier replacement programme. The panel was under the chair of the Chief Scientific Adviser (CSA) Professor Zuckerman, with Dr. J.C.Kendrew as his deputy. The other members of the panel were Professor H.Bondi from King's College, London, Sir Edward Bullard and Dr. M.H.Hill from Cambridge, Sir William Cook from the Atomic Energy Agency, and Professor R.V.Jones from Aberdeen University. Pike was reminded by his PUS that both Bullard and Bondi had worked in the Admiralty during the War and that although Jones had worked in the Air Ministry this had done "*little to develop his love for the Air Staff*".<sup>68</sup> He could also have added that Zuckerman had worked under Mountbatten in the wartime COHQ.

The Zuckerman panel heard evidence from the three Service Ministries and completed its report in April 1963.<sup>69</sup> The panel concluded that the most likely case of intervention would be at the invitation of a threatened regime or for internal security reasons. It was therefore reasonable to expect that an airhead would be available and that initial opposition would be slight. Such intervention did not require carriers, nor did it require the full range of bases projected by the Air Ministry. It did, however, require maintenance of the present planned RAF strength of transport and fighter/ground attack aircraft. As the level of opposition rose, it would become more difficult to establish the essential airhead until a point was reached where the carrier solution was the most effective and enduring. The panel

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<sup>67</sup>. Ibid.

<sup>68</sup>. PUS to CAS, 28 September 1962; AIR 8/2354.

<sup>69</sup>. **Report of Enquiry into Carrier Task Forces**, 22 April 1963; AIR 8/2354 and AIR 20/1124.

recognised that such operations against “*moderate opposition*” were the least likely forms of intervention, but considered that, nevertheless, the Government should still be prepared to carry them out. Moderate opposition was defined as:

opposition which would be supported by Russian type equipment though not of the latest patterns. The opposition the enemy might dispose, either directly or indirectly, would be of conventional equipment up to the level of MiG 21s together with the radar environment necessary for the operation of such aircraft.

The carrier solution was more acceptable in these more demanding circumstances for two reasons. Firstly, the aircraft carrier provided for a more effective air defence and air support in the early stages of an operation, and, secondly, the panel doubted the possibility of retaining into the 1970s the number of mounting bases required by the Island Stance. Operations against strong opposition were discounted, except in association with United States forces. The Panel concluded as follows:

We advocate the retention, as long as possible of such bases and airfields overseas as we possess, or can readily obtain, to enable the present planned Air Force strength to intervene in what are likely to be the most frequent cases - against no opposition, or within the capabilities of the Force to overcome.

If the Government wished to intervene against *moderate* but not strong opposition, we believe the carrier replacement programme should go forward to provide not less than two carriers east of Suez. Failing provision of these, Her Majesty's Government would be restricted to a policy of using existing carrier forces and bases for as long as they lasted; as time progresses the Government would be more and more limited militarily in the interventions which they could make.

The Air Ministry were unhappy with Zuckerman's paper, considering that it had a pro-carrier bias and that it laid too much emphasis on operations against moderate opposition.<sup>70</sup> Certainly, the paper supported the Admiralty in its bid for a minimum of four fleet carriers, in order to keep two east of Suez at any one time. The ability of the Island Stance to counter anything but the most limited

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<sup>70</sup>. AIR 20/1124. M.E.Quinlan to CAS, 24 April 1963; AIR 8/2354.

opposition had been largely discounted. Although it had been stated that operations against moderate opposition were the only rationale for these carriers, such operations were regarded as the least likely contingency. The Air Ministry were to emphasise this point in future battles.

It appears that Mountbatten was becoming increasingly frustrated by the impasse over the aircraft carrier question. In a telephone conversation with Caspar John he spoke of knocking the 1SL's and CAS's heads together to stop the running fight. Caspar John was somewhat exasperated by Mountbatten's attitude. He noted that only a month earlier the CDS had advised him not to compromise with Pike and to "*fight him to the death*". John stressed that the large carrier had been endorsed "*unanimously*" by the entire Board [not entirely true] and that he could not adapt it to a "*Pike Ship*" policy on his own initiative even had he wanted to. Nevertheless, he was keen not to make Mountbatten's life unnecessarily awkward by perpetuating the "*warfare*" in the COS Committee and promised to "*do some thinking*" on the issue.<sup>71</sup>

At a meeting held in Mountbatten's office on 21 January 1963, Pike outlined his view of the future of carrier aviation to Caspar John. Aware of Mountbatten's desire for compromise, the CAS appears to have been willing to accept a role for carrier aviation. He specifically pointed out that in his opinion there was no question of the RAF launching a take over bid for the Fleet Air Arm. Pike's main point was that the Fleet Air Arm should abandon the tactical strike role. This would avoid duplication of effort with the RAF and would allow fewer Buccaneers to be purchased. It would also allow the Buccaneer to be phased out earlier and would remove the need for a successor. The Navy could be equipped solely with VTOL P.1154 fighter/ground attack aircraft in common with the RAF. This would represent a financial saving in itself and would lead to less sophisticated and therefore cheaper carriers.<sup>72</sup>

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<sup>71</sup>. John to CDS, 16 January 1963; ADM 205/197.

<sup>72</sup>. John to Pike, 22 January 1963; ADM 205/194.

John welcomed Pike's assurance over the future of the Fleet Air Arm but at this stage he was unwilling to give up the tactical strike role. The two Chiefs were able to agree that the Fleet Air Arm and the RAF should achieve compete flexibility between ship and shore operations in the Army support role. Although Pike and John could agree in principle on the requirement for a common fighter/ground attack aircraft, Naval and RAF requirements were not entirely compatible. The P.1154 was planned as an advanced supersonic VTOL aircraft. Whereas the RAF wanted a single seat low level strike and ground support aircraft to replace the Hunter, the Navy wanted a heavier two-seater to replace their fighter, the Sea Vixen. The Naval aircraft had to be capable of being catapulted, it would need a good rate of climb and endurance at high level, and would be equipped with radar.<sup>73</sup> Nevertheless, John noted that there would be nothing to stop VTOL RAF P.1154s operating from carriers without the benefit of catapulting, although obviously they would not be able to carry the payload of their naval counterparts.<sup>74</sup>

Faced with the need to compromise, John outlined a scaled down programme of carrier replacement to a weekend meeting of the Defence Committee at Chequers in early February. An essential feature of this programme was the abandonment of the tactical strike role which would allow for smaller carriers and would remove the requirement for the Buccaneer replacement, O.R.346. In addition, the carrier replacement programme would be spread over a period of years and, with the abandonment of the tactical strike role, smaller carriers could be accepted. It was estimated that by 1976 a reduced programme on these lines would show a capital saving on carriers and aircraft of some £200 million yet would still preserve many of the military options offered by current Admiralty proposals.<sup>75</sup>

Following the Chequers meeting the Admiralty developed this idea. The "*Clipped Wing Navy*" approach catered for a reduced programme of two new 43,000 ton aircraft carriers to replace *Victorious* and *Ark Royal* with two more carriers, *Eagle* and

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<sup>73</sup>. Wettern, *The Decline of British Seapower*, p.224.

<sup>74</sup>. John to Pike, 22 January 1963; ADM 205/194.

<sup>75</sup>. Carrington to Thorneycroft, 12 February 1963; DEFE 7/1804.

*Hermes* , kept in service to about 1980. This would allow a decision on their replacement to be delayed until 1971. The tactical strike role would be abandoned and the Fleet Air Arm would adopt the P.1154 in common with the RAF. The overall cost of this programme was estimated to be £370 million. The cost of reprovisioning the Navy with sophisticated missiles, should aircraft carriers be discontinued, was estimated to be £320 million and so the Admiralty could argue that for a mere £50 million the Royal Navy could retain a world-wide intervention capability and preserve the balance of the fleet. The First Lord and 1SL were advised not to lose hope of getting a 53,000 ton ship as under these “*build-two/stretch-two*” proposals the difference in cost between this and a ship of 43,000 tons was only £20 million.<sup>76</sup>

On 15 April the Board of Admiralty met to consider three papers that emerged after the Chequers meeting. Paper A was an Admiralty investigation of an offshore support ship concept proposed at Chequers by Thorneycroft. Paper B, entitled “*The Navy Without Aircraft Carriers*” was produced at the request of Thorneycroft and aimed to show the measures necessary to make the Navy viable in the 1970s without aircraft carriers. The limited war intervention role would remain the primary role of the Navy and it would retain commando carriers and offshore support ships. As early as January 1963 ACNS, Rear-Admiral Hill-Norton, had been urging that the Admiralty should emphasise the cost of re-provisioning the navy with missiles, should aircraft carriers be abandoned.<sup>77</sup> Consequently, Paper B stressed the very great expense that a switch to an all-missile navy would entail. It pointed out that the Navy would be abandoning a field in which it was ahead of its likely opponents (seaborne airpower) and would be relying for a surface attack and long range air defence capability on a field in which the opposition had a ten year lead. In any case, the paper concluded that seaborne fixed wing aircraft would remain essential for tactical reconnaissance, AEW surveillance, probing air and surface contacts and the destruction of stand-off jammers. For this there was no alternative to the provision of an aircraft carrier. In reality the paper did not represent an attempt to show the requirements of the Navy without aircraft

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<sup>76</sup>. ADM 205/194.

<sup>77</sup>. ACNS to 1SL, 8 January 1963; ADM 205/194.

carriers. Rather, it represented another salvo in support of those ships.<sup>78</sup>

Paper C was entitled "*Aircraft Carrier Replacements*" and elaborated on the proposal to build only two carriers during the 1960s. The paper asserted that there was no viable alternative to the maintenance of orthodox aircraft carriers if the Navy was to fulfil its expected roles. It proposed finding savings in the defence budget by the rationalisation of tactical airpower east of Suez.<sup>79</sup> Under this proposal two carriers would be stationed east of Suez and the total number of aircraft in the region would be reduced by the adoption of common, inter-operable tactical aircraft for sea and shore based operations, making full, mutual reinforcement possible. The proposal could be implemented with Buccaneers and P.1154s as soon as the latter became available, or if the Air Ministry could not accept Buccaneers in the place of TSR.2, the scheme could be partially implemented with P.1154s. With an allocation of 20 aircraft to each of the two carriers and 60 more distributed between the bases at Aden and Singapore, the total aircraft deployed east of Suez would number 100, as opposed to the current figure of 150. The saving of fifty aircraft would be made possible because of the ability of the aircraft to achieve mutual reinforcement. The Board were concerned that the proposed rationalisation of aircraft represented too great a concession. However, the package was reluctantly accepted as being the least likely to experience delay and the most likely to gain financial acceptance.<sup>80</sup>

At the Chequers meeting of the Defence Committee Thorneycroft had raised the possibility of providing air support for Army intervention from off-shore support ships using V/STOL aircraft which would normally be land based. On 26 February the COS approved the broad staff requirements for such a ship.<sup>81</sup> The purpose of the Off-Shore Aircraft Support Ship would be to provide facilities for refuelling, rearming and first line servicing of P.1154 aircraft in support of intervention operations. A maximum of twelve aircraft would operate from the ship at any one time. The ship would not be capable of

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<sup>78</sup>. Memo B.1451; ADM 167/161.

<sup>79</sup>. Ibid.

<sup>80</sup>. Board Minute 5581; ADM 167/162. Carrington to Thorneycroft, 9 May 1963; DEFE 7/1804.

<sup>81</sup>. COS 16mtg/63, 26 February 1963; DEFE 4/52.

independent operations; it was merely an adjunct to land based airpower.<sup>82</sup> In accordance with instructions, the Admiralty studied the feasibility and cost of providing such a ship, which they dubbed the off-shore garage, or alternately the *Thorney craft*.<sup>83</sup> The resulting study was Paper A, considered by the Board of Admiralty on 15 April.

In line with previous investigations into the *Pike ship*, both *Bulwark* and *Albion* were considered too small to combine the roles of commando carrier and off-shore support ship. In any case by the time this vessel was required both these ships would be approaching the end of their useful lives. Similar considerations ruled out HMS *Magnificent* and HMS *Centaur*, the only other light fleet carriers that could be considered. The two assault ships under construction could provide spots for only two VTOL aircraft and space for the support envisaged could only be provided at the expense of the primary function of these ships. Conversion of these was therefore discounted. Conversion of a 19,000 ton Fleet Replenishment Ship would partially meet the requirement, providing eight spots for P.1154, although there would be no space for the transport of helicopters. Constructed to merchant ship standards, the ship would be extremely vulnerable to damage in action. In addition, it would be dependent on escorts for all warning and control functions except launch and delivery, and for almost all forms of defence. The cost of such a conversion would be between £15-18 million, excluding the original cost of the ship.

The Admiralty considered that the required characteristics could be met by new construction, creating a ship of 20-22,000 tons at a cost of between £17 and £20 million. The possibility of a dual purpose escort cruiser/offshore support ship was rejected as operationally impractical. The wide ranging responsibilities of the escort cruiser would be prejudiced by the need for the support ship to operate from a specific mounting base and to be readily available to train with shore based squadrons and to support the Army in a given geographical area. A newly built ship could combine both the role of commando ship and offshore support ship, but this vessel would be about 40,000

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<sup>82</sup>. COS 97/63, 6 March 1963; DEFE 5/136.

<sup>83</sup>. ADM 205/194.



tons and would cost between £33 and £38 million. Indeed, such a large ship might warrant extra defensive measures which would raise the cost beyond £40 million. While such a ship could be made to work, it was noted that in either role it would operate to something less than the efficiency of a single role ship.

Of all the possibilities, the Admiralty considered that the most economical would be to construct three new purpose-built single role ships at a total cost of between £51 and £60 million. This would allow two to be permanently based east of Suez, one at Singapore and one at Aden. The Admiralty felt compelled to include a footnote to their report in which they outlined their opposition to the “*offshore garage*” concept. They considered that this ship could only be a partial substitute for carriers as it was designed to fill only one role, that of support for the Army ashore. The seaborne convoy of which it was a part could not meet a surface or air threat unless it also contained conventional aircraft carriers. They doubted the wisdom of being able to provide only first line servicing for an aircraft 1,000 miles from base. Unserviceable aircraft that could not be repaired on board would either pile up on the ship or have to be ditched overboard. The size of the ship would prejudice stability and would contain no *stretch* for the operation of future generations of aircraft. The Admiralty felt unable to recommend building a warship of over 20,000 tons with virtually no self defence or mutual defence capabilities and with a bare minimum of conventional equipment. To remedy this would require a much larger ship costing about £30 million.<sup>84</sup>

The Air Ministry considered that the Admiralty were deliberately exaggerating the costs and weaknesses of the off-shore support ship in an attempt to strengthen their carrier case. They considered the off-shore support ship/commando carrier combination a “*useful and flexible vehicle*”.<sup>85</sup> Air Vice Marshal Wykeham, the Director of the Joint Warfare Staff, agreed with his parent Service, considering that the Admiralty were unduly pessimistic about this ship.<sup>86</sup> The Army, the Service which these ships were designed to support, were much

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<sup>84</sup>. COS 176/63, 9 May 1963, report by Admiralty; DEFE 5/138,

<sup>85</sup>. Brief for CAS, 14 May 1963; AIR 20/11423. AIR 8/2354.

<sup>86</sup>. Note by Wykeman to CDS; ADM 205/192.

less convinced. The Minister of War, John Profumo, minuted Thorneycroft outlining the Army's interest in the issue, which was based on the need for air support for amphibious assault operations. Accepting the Admiralty case, he gave the War Office opinion that "*a solution which allowed the continuation of fixed wing carriers would be welcome in the Army*".<sup>87</sup>

When the COS discussed the Admiralty report on 14 March, John made it clear that, although the off-shore support ship was feasible, it did not effect the case for carriers as these would in any case be required to ensure the safe and timely arrival of the naval force of which the offshore support ship was a part. He accepted that there might be some benefit in investigating the use of VTOL aircraft from commando carriers and the Admiralty was invited to examine the provision of facilities for this in present and any replacement commando carriers. The *Thorney craft* idea was allowed to drop.<sup>88</sup> Air Ministry acceptance of the *Thorney craft* concept implied tacit acceptance of the fact that land based air alone could not offer adequate air support 1,000 miles from base. Similarly, Pike's apparent willingness to compromise at the January meeting in Mountbatten's office might have been prompted by his realisation of the weakness of the Island Stance concept, hence the proposals for small carriers capable of providing local air defence and carrying out ground attack missions.

Economic factors remained the key constraint on defence procurement. In June 1963 Reginald Maudling, the Chancellor of the Exchequer, stressed that it was vital that the defence budget was kept within seven percent of GNP if economic failure was to be avoided.<sup>89</sup> In such a climate it was going to be difficult to gain approval even for the truncated carrier replacement programme. To make matters worse for the Admiralty, on 19 June the Defence Committee decided that:

It would....be right to base future planning on the assumption that by 1970 we shall not undertake by

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<sup>87</sup>. Profumo to Thorneycroft, 24 May 1963; ADM 20/1124.

<sup>88</sup>. COS 33mtg/63. 14 May 1963; DEFE 4/154.

<sup>89</sup>. D (63) 21, 16 June 1963, memo by the Chancellor of the Exchequer; CAB 131/28.

ourselves to mount assault operations against entrenched opposition and that any operations of this kind would be undertaken, if at all, as part of an allied campaign.<sup>90</sup>

This was hardly a new development. It had never been suggested that Britain should undertake independent assault operations against entrenched opposition and the Zuckerman Panel had specifically ruled out such operations. However, much depended on the interpretation of the word “*entrenched*”. It would be possible to argue that this ruled out all assault operations, except those of a very minor nature which the Island Stance was best designed to meet. This development had been anticipated by the Admiralty, hence the emphasis being placed on the cost of re-provisioning with missiles. It is noteworthy that when Thorneycroft put the case for new aircraft carriers to his Cabinet colleagues he emphasised the requirement as being a general one rather than tying it specifically to the need to support assault operations.<sup>91</sup>

Thorneycroft put the carrier replacement programme to the Defence Committee on 2 July. He noted the plans to adopt common aircraft and to rationalise the deployment of aircraft east of Suez. No doubt mindful of Treasury opposition he proposed placing an order for only one new aircraft carrier, leaving the decision for the second carrier open for later discussion.<sup>92</sup> As was perhaps inevitable, the Treasury opposed this new ship.<sup>93</sup> The Air Ministry launched a rearguard action against the carrier, throwing in their lot with the Treasury and stressing the cost and supposed vulnerability of aircraft carriers.<sup>94</sup>

On 23 July in a meeting within the Ministry of Defence, Thorneycroft secured the approval of CIGS and Caspar John for his proposed programme. Pike demurred, believing that while it would be militarily desirable to have three carriers available in the 1970s he was unsure if Britain would be able to afford this force.<sup>95</sup> The

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<sup>90</sup>. D (63) 8 mtg, 19 June 1963; CAB 131/28.

<sup>91</sup>. D (63) 9 mtg, 10 July 1963; CAB 131/28.

<sup>92</sup>. D (63) 2 July 1963, memo by Minister of Defence; CAB 131/28.

<sup>93</sup>. D (63) 24, 5 July 1963, memo by the Chancellor of the Exchequer; CAB 131/28.

<sup>94</sup>. D (63) 29. 23 July 1963, memo by Hugh Fraser; CAB 131/28.

<sup>95</sup>. Note of a meeting held on 23 July 1963; ADM 205/199.

Minister of Defence remained firm in his advocacy of new carriers. On 24 July he declared that:

A decision to dispense altogether with aircraft carriers would result in very considerable financial savings but, except for the Polaris submarines force, would mean the end of the Royal Navy as a fighting force.

He noted that carriers were vital for the current strategy and, in what was possibly an attempt to intimidate the Army and Air Force, he pointed out that should it be decided to abandon any major commitment they would also need to examine the future of programmes such as the new transport aircraft, TSR.2, and the role of the Gurkhas.<sup>96</sup> John Boyd-Carpenter, the Chief Secretary of the Treasury, rejected the claim that without aircraft carriers the Navy would cease to exist as “*plain nonsense*” , and recommended abandoning plans to replace existing carrier and their aircraft.<sup>97</sup>

The programme Thorneycroft now proposed was for the construction of one new carrier to replace *Victorious* and *Ark Royal* by 1972 at the latest, with *Hermes* and *Eagle* stretched to last throughout the 1970s. This force of three carriers was the absolute minimum that could still provide two ships operational east of Suez. In total this revised programme would cost £285 million. He emphasised that a decision to abandon aircraft carriers would not only mean that the Fleet would be unequal to its major roles, but due to the need to re-provision with missiles there would be little or no financial benefit. He rejected calls by the Treasury and the Air Ministry to undertake further studies into the issue, believing that the question had already been thoroughly examined.<sup>98</sup>

Despite the emphasis being placed on re-provision costs and the central role which the carrier had to play in the Fleet, the requirement was still linked directly to intervention operations east of Suez. With only three carriers there could be no operational carrier based west of Suez if the minimum of two was to be maintained in the east. The Navy as a whole might need carriers in the 1970s but only that portion

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<sup>96</sup>. D (63) 11 mtg, 24 July 1963; CAB 131/28.

<sup>97</sup>. C (63) 133, 22 July 1963, memo by the Chief Secretary to the Treasury; CAB 129/114.

<sup>98</sup>. C (63) 141, memo by the First Lord and Minister of Defence; CAB 129/114.

of it which was stationed east of Suez would actually be getting these ships. The Western Fleet would have to do without, although they would enjoy the protection of RAF operated land based air.

The Chancellor of the Exchequer finally removed Treasury opposition to ordering the new carrier on the grounds that not to do so would require abandoning a major role and at present there was no question of doing this.<sup>99</sup> On 17 July the Board of Admiralty approved the sketch designs of a new aircraft carrier to replace *Victorious*. Based on Design Study No.53, the ship would be 53,000 tons with a maximum speed of 28 knots. It was to embark at least 30 new fighter/strike aircraft, four AEW aircraft, two SAR and five ASW helicopters. The cost was to be in the order of £55 to £60 million.<sup>100</sup>

On 30 July the Cabinet agreed that the carrier fleet should be maintained at the level of three ships during the 1970s and that a new carrier should be built to replace *Ark Royal*. This made the requirement for the ship slightly less urgent than it would have been if it was to replace *Victorious* which was due to expire in 1971, one year earlier than *Ark Royal*.<sup>101</sup> That afternoon, Thorneycroft announced to the House of Commons the decision to build one aircraft carrier of about 50,000 tons at a cost of around £60 million. The question of aircraft carrier replacement had aroused much speculation in the House. In particular the Labour Party had been concerned that the government was contemplating a large carrier on the lines of the 78,000 ton American *Forrestal* class. In his response to Thorneycroft's statement, the opposition spokesman, Denis Healey, expressed relief that this had not proven the case. There was general cross party agreement in the House for the decision to build a new carrier, but only because it was intended primarily to provide air support for amphibious operations and was not a strike carrier on the American model.<sup>102</sup>

The Admiralty clearly did not believe that aircraft carrier construction would be limited to one ship. On 31 July Carrington

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<sup>99</sup>. CC (63) 50th Conclusions, Cabinet meeting on 30 July 1963; CAB 128/37.

<sup>100</sup>. Memo B.1456; ADM 167/161.

<sup>101</sup>. CC (63) 50th Conclusions.

<sup>102</sup>. *Parliamentary Debates (Hansard)*, Volume 682, column 237-238 + 992-994.

informed the House of Lords that the new ship was only the first step towards an eventual class of carriers.<sup>103</sup> The Admiralty gained the Queen's approval to name the new carrier HMS *Queen Elizabeth*. Anticipating further construction they had already decided to call the second ship HMS *Duke of Edinburgh*, in the tradition of naming big ships after the reigning monarch and their consort.<sup>104</sup> On 8 February 1963 a prototype VTOL aircraft, the P.1127 Kestrel, undertook the first ever vertical landings and take offs at sea from the carrier *Ark Royal*.<sup>105</sup> Difficulties creating a satisfactory naval version of the P.1154 saw the project cancelled. In the 1960s V/STOL technology was still in its infancy and the technical difficulties of producing a supersonic V/STOL aircraft proved insuperable. Thirty years later there is still no such aircraft. Instead, in February 1964 the decision to procure supersonic Phantom jets from the United States was announced. Equipped with Rolls Royce Spey engines, the Phantom was an outstanding fighter aircraft. Together with the Buccaneer, which first entered service in 1962, the Phantom offered the Fleet Air Arm a first class fighter and strike capability, able to match the performance of their land based counterparts.<sup>106</sup>

In contrast to the general support for the new carrier in Parliament, the whole aircraft carrier/Island Stance debate had been conducted with great acrimony in Whitehall. Lord Carrington recalled being told by Hugh Fraser that he so loathed the bitterness and unseemliness of the quarrel that it made him ill. The debate aroused animosity and suspicion between the Navy and the RAF, which Carrington characterised this in humorous terms:

I think that a number of air marshals could hardly go to sleep at night without making sure there wasn't an admiral under the bed, and vice versa.<sup>107</sup>

The Air Ministry were very suspicious of Mountbatten. Both Air Marshal Boyle and his successor as CAS, Air Marshal Pike, were

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<sup>103</sup>. Crowe, *Policy Roots*, p.163.

<sup>104</sup>. ADM 1/29044.

<sup>105</sup>. Wettern, *Decline of British Seapower*, p.214.

<sup>106</sup>. Grove, *Vanguard to Trident*, p.258. Paul Beaver, *The British Aircraft Carrier*, (Wellingborough: Patrick Stephens, 1987) chapter 18.

<sup>107</sup>. Carrington, *Reflect on Things Past*, p.160.

convinced that as CDS Mountbatten abused his position to obtain advantage for the Navy. Harold Watkinson also felt that Mountbatten had a naval bias, certainly he strongly opposed Watkinson's favourite project, TSR.2, in favour of the Navy's Buccaneer. When 1SL, Mountbatten had been committed to the carrier programme, and this commitment may have interfered with his impartiality as CDS. The refusal to support the RAF's requests for an independent costing of the Island Stance would seem to support the claims that Mountbatten favoured the Royal Navy over the other Services.<sup>108</sup>

Intense feelings were aroused because the issues involved struck at the very heart of each Service. Since the demise of the battleship after the Second World War, aircraft carriers had been the Navy's capital ships. They embodied at once the Navy's main offensive and defensive strength. While it is not true to say that the decision to dispense with carriers would have meant the end of the Navy as a fighting force, such a decision would have radically altered the shape of the fleet, limiting its ability to operate in the face of sophisticated air attack away from land based air cover. RAF opposition to a new generation of aircraft carriers went beyond the traditional suspicion of seaborne airpower. Weakened by the decision of the 1957 Defence White Paper to reduce Fighter Command and cut the tactical air forces based in Germany, the RAF sought to emphasise its role in limited war. The RAF was further undermined by the cancellation of the air to ground missile, Skybolt, in December 1962 and the decision that in future Britain's nuclear deterrent would be seaborne, with Polaris submarines replacing V-bombers. This at once removed a major role of the RAF and threatened to further strain the defence budget. A decision to build new aircraft carriers could prejudice RAF procurement plans by monopolising limited resources and by reducing the need for long range strike aircraft east of Suez.

The debate over future intervention capabilities east of Suez was slightly artificial. The Admiralty and Air Ministry sought to gain acceptance for their own strategies based on amphibious seapower and land based airpower respectively. The Air Ministry case rested on the

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<sup>108</sup>. Ziegler, *Mountbatten*, p.586-587. Watkinson, *Turning Points*, p.140-141. Till, "Earl Mountbatten of Burma" p.265-282. Brown, "Mountbatten as First Sea Lord" p.63-68.

need to maintain only very limited intervention capabilities, similar to those which had enabled Britain to air lift Paratroops to Jordan in 1958 to meet a perceived threat to King Hussain. The Admiralty maintained that a higher level of capability was required, and that this could only be provided by an amphibious task group supported by an aircraft carrier and backed up, where necessary, by land based airpower. However, both sides in this dispute had another agenda, for which the east of Suez debate was something of a foil. Amphibious warfare was very useful to the Admiralty, as it enabled them to support the construction of a new generation of aircraft carriers, ships they would have wanted anyway but which could only be justified through their utility in supporting amphibious assaults in limited war. Likewise the Island Stance enabled the Air Ministry to support procurement of the advanced TSR.2 aircraft and to push for a major new role for the RAF. These were issues which both Services considered to be vital.

Both sides in the dispute were willing to accept a degree of compromise. Caspar John was a moderating influence, acknowledging that even with a new generation of carriers, land based air would be required for any credible strategy east of Suez. The Admiralty never claimed that seaborne forces alone could suffice. They advocated a partnership with the RAF in order to achieve a credible strategy. Likewise, the Air Ministry were willing to contemplate small, multi-purpose aircraft carriers such as the *Pike ship* or *Thorney craft*. However, the Admiralty were unable to compromise on the requirement for large, modern aircraft carriers, and the RAF consistently found this unacceptable. Carrington stated that he believed that the Navy should have been willing to consider the compromise proposals for island bases and multi-purpose carriers. He believed that in general the Navy should have been more willing to investigate the possibility of procuring greater numbers of cheaper and less sophisticated ships. Such ships might be less capable and less flexible than more expensive vessels but could be of value in support of a single role, that of military intervention east of Suez. It could be argued that one did not need the full range of modern naval capabilities to meet the level of threat likely to be encountered in this theatre. At that time the only other navy operating in any strength in



the region was the United States Navy, and that was not considered a likely opponent. Carrington notes that the Admiralty were opposed to the idea of procuring cheaper, less capable ships. They emphasised the need for a technologically advanced “*first eleven*” navy, able to meet the full range of threats which it was likely to meet. The Admiralty did not want a large unsophisticated fleet well suited to intervention in limited war but unable to defend the sea lanes against sophisticated Soviet attack.<sup>109</sup>

Attitudes towards amphibious warfare had come a long way since Suez and amphibious capabilities were undergoing a transformation, with the construction of new shipping and the conversion of *Bulwark* and *Albion*. However, it is difficult to assess to what extent this represented a real change in Admiralty attitudes. The Board only reluctantly accepted the shift in favour of limited war in 1956 as it was “*likely to be the least damaging to naval interests*” of all possible modifications of existing policy. In 1960 Harold Watkinson had specifically told Selwyn Lloyd that he supported the case for commando carriers and assault ships not because the Admiralty particularly wanted them but rather because he needed them to plug gaps in military strengths and dispositions. In 1963, at a time when the aircraft carrier debate was at a peak the Admiralty agreed to disband one Commando and not to recruit another in order to gain War Office support in Whitehall. They downplayed the possibility of adopting the *Pike Ship*, a vessel whose performance would have been limited to support of amphibious operations in conjunction with the RAF. Their main interest was in getting a proper fleet carrier, the centre piece to a modern “*first eleven*” navy. The first priority of the Admiralty in the 1960s was the same as it had been in the 1940s, that is the maintenance of a powerful, modern, balanced fleet.

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<sup>109</sup>. Carrington, *Reflect on Things Past*, p.160-161.

## **CONCLUSION**

The post-war organisation for amphibious warfare was established by the RAW Committee in 1944. Reporting only 23 days after the Normandy landings, the committee was heavily influenced by recent operational experience. The organisation proposed was designed to prepare Britain's peacetime armed forces for large scale operations similar to those recently conducted in Europe. This called for an independent, inter-Service organisation, responsible for maintaining and promulgating existing knowledge of amphibious warfare and for developing new techniques. It also required widespread training facilities and the maintenance of a permanent peacetime amphibious fleet. The possibility of giving the Royal Marines primary responsibility for amphibious warfare was considered and rejected. Under the existing concept of operations, amphibious warfare was an inter-Service responsibility. Only the three Services operating in partnership could provide the level of forces required for the large scale operations envisaged. The committee did not believe that amphibious forces would be required in circumstances short of major war. Royal Marine responsibility for amphibious warfare was limited to the provision of Commandos and landing craft crews. This immediately removed one reason for Admiralty support for amphibious capabilities. If the Royal Marines had been given special responsibility for amphibious warfare, Admiralty support for this role would have bolstered the independent status of the Marines, protecting them from claims that they should either be disbanded or incorporated into the Army.

Following 1945 harsh economic realities brought rapid cuts in defence spending. Facing manpower shortages and the requirement for strict economy, the Services were forced to concentrate resources on high priority projects. The Admiralty sought to maintain its ability to secure command of the sea and attempted to limit the resources devoted to other responsibilities. In this climate it was inevitable that amphibious capabilities would suffer. Early plans for two large Combined Training Establishments had to be abandoned, and the creation of an Assault Training Force capable of lifting a brigade group, although accepted as policy, never took place. However, a Combined Operations Centre was

established in North Devon and the independent, inter-Service headquarters was maintained in London. The Army were keen to maintain amphibious capabilities and supported COHQ to this end in the COS Committee.

The Admiralty were much less keen on Combined Operations. They were responsible for providing most of the men and material required for Combined Operations while the Army was seen as the main user. The Navy had been suspicious of COHQ ever since Keyes first moved his headquarters out of the Admiralty building. This suspicion was exacerbated by a natural reluctance to divert resources away from the conventional fleet and towards something that was essentially a support role for the Army. In 1948 Commodore J.A.Grindle, a director in COHQ, illustrated the way his parent Service viewed Combined Operations:

Combined Operations has achieved a reputation of being a Black Art practised, at least so far as the Navy is concerned, by a crowd of undisciplined and usually bearded men who like to call themselves sailors and have the privileges of the sailor, but who dress themselves as untidy caricatures of soldiers.<sup>1</sup>

In the period between 1944 and 1950 the Admiralty made no less than six attempts to either abolish COHQ or to undermine its independent status.

Lack of resources and lack of priority meant that there was little opportunity for widespread amphibious training. The only Army unit to receive regular training was a territorial Beach Brigade. Even the Commando Brigade had to go long periods without exercising with landing craft and was frequently employed on static garrison duties. The requirement to keep in commission sufficient lift for a brigade group was never met, although from 1952 the Admiralty did maintain a small AW Squadron in the Mediterranean. Similarly, lack of priority saw new construction of amphibious material limited to a small number of minor craft and the conversion of three LST(3) to LST(A). In these circumstances it was inevitable that the assault fleet, made up of ageing

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<sup>1</sup> J.A.Grindle, "The Development of Combined Operations Material and Technique", *RUSI Journal* vol.93, No.573, Nov 1948 p.237-250.

war built vessels, would become inefficient and obsolete. While the United States pressed ahead with new approaches and developed a modern amphibious capability, British equipment and techniques remained wedded to the past.

During the 1950s the increasing availability of weapons of mass destruction and the development of the hydrogen bomb brought about a general strategic reappraisal. The concentration of resources which large scale amphibious assaults required promised to provide a tempting target for nuclear attack. As the result of an examination by the JPS, in 1954 the COS specifically ruled out any requirement to conduct large scale assaults either in cold war or in the early stages of a major conflict. What was now required were small standing forces capable of reacting promptly to a situation as it arose. Overturning the accepted wisdom of the previous decade, the COS decided that the time was right for the Royal Marines to play the predominant part in the development of amphibious warfare. The Amphibious Warfare Centre was moved from Fremington to Poole where it amalgamated with the Amphibious School, Royal Marines to form the Joint Services Amphibious Warfare Centre. AWHQ remained in London until it was replaced by the Joint Warfare Committee in 1962. However, from 1955 it was the Admiralty and not AWHQ who controlled the destiny of amphibious warfare.

By the mid-1950s it was appreciated that major war in Europe was unlikely, but that there was an increased possibility of small scale conflicts outside Europe. This posed a problem for the Royal Navy. Since the War the Navy had based its primary rationale on the need to keep open the sea lanes in a future battle of the Atlantic. The emphasis had been on a large navy devoted mainly to anti-submarine warfare and backed up by a large mobilizable fleet in reserve. The Navy's prized aircraft carriers were devoted to global war contingencies. Under new defence priorities forces designed to fight a major war were accorded lowest priority whilst forces for limited and cold war were to be built up. The Admiralty was compelled to readjust its own priorities and to emphasise the cold and limited war role in order to safeguard the fleet. They submitted their new concept for the future of the Navy to the COS in July 1956. Forces intended for global war were reduced and

resources reallocated to limited and cold war capabilities. Before this new concept could be implemented the Navy was required to take part in a joint airborne and amphibious assault at Port Said in November 1956. Although a military success, the time taken to mount the operation contributed to its political failure and demonstrated the weakness of Britain's intervention capabilities. The failure to maintain sufficient ships and craft in an appropriate state of readiness and the overall neglect of amphibious warfare since 1945 was a major factor in this weakness.

An important part of the Navy's new strategy of providing forces for cold and limited war, amphibious capabilities underwent a renaissance after the Suez crisis. The old wartime lift was replaced by conversion and new construction. Two small aircraft carriers were converted into commando carriers and plans to build two new assault ships and six logistic landing ships were approved. The decisions taken in the early 1960s on the future amphibious capability were to determine the shape of amphibious forces for over thirty years. The specialist assault shipping deployed in the 1982 Falklands conflict and still active in the 1990s had its origins in the decisions taken during this period. The Admiralty built a case for an intervention strategy centred on powerful task groups of amphibious forces backed up by aircraft carriers. By 1962 the Navy based its case for the full range of modern capabilities on the need to support these task groups. In particular, a requirement to build a new generation of large aircraft carriers was justified in terms of their use in support of amphibious operations in limited war. This brought the Navy into conflict with the RAF who had developed their own intervention strategy centred on land based airpower. In the debate that followed, the ability of seaborne task forces to offer a higher level of capability ensured Ministry of Defence, and later Cabinet approval of the Admiralty case.

Post-war Admiralty attitudes towards amphibious warfare were a reflection of the teaching and experience of the Royal Navy. The Navy's wartime experience of amphibious operations was largely that of acting in support of the Army in order to initiate or support a land campaign. The specialist craft and equipment needed to conduct such operations drew men and resource away from the fleet, and the

requirement to provide naval support for amphibious assaults diverted scarce shipping away from other important duties. Amphibious warfare had done little to promote the war at sea in the European theatre and was accepted by the Navy more as an onerous duty than an opportunity to be grasped. The existence of an independent and inter-Service COHQ did much to promote expertise in amphibious operations but tended to further alienate the Admiralty from this mode of warfare. In the immediate post-war years Britain's precarious financial position dictated the need for strict economy and this was reflected in a series of cuts in defence spending. In this environment the Admiralty was forced to concentrate resources on what it considered to be top priority projects. Highest priority was given to the core task of providing the equipment required to maintain control of the sea lanes in a future battle of the Atlantic. The inter-Service requirements of amphibious warfare were accorded a low priority and suffered accordingly.

The Royal Navy had traditionally been Britain's deterrent. Possession of a powerful fleet, and the knowledge of what that fleet could do, had been a fundamental component of British power. The maintenance of a strong amphibious capability after 1945 could conceivably have acted as a powerful new deterrent on a would be aggressor. The strategic potential of modern amphibious forces had very recently been demonstrated both in Europe and the Pacific. The post-war Soviet naval build-up can be interpreted as a reaction to the threat that this posed. Such a strategy would certainly have appealed to supporters of the traditional "*British way in warfare*". However, the Royal Navy was ill-equipped to provide such a force. In the 1940s British defence planning was based on a strategy of retreat, mobilisation, and only pushing back a Soviet advance once they had been weakened by an allied air offensive. If this was the case, then the initial priorities would, as in 1940, be air defence and defence of the sea lanes. Opportunities for amphibious operations would be limited to small scale raids. Plans for anything more ambitious could be left to a later stage. The Admiralty properly concentrated on the need to maintain command of the sea and allocated their limited resources accordingly. Modern amphibious operations required a great deal of specialist manpower, equipment and shipping. The men and resources required

to provide anything more than a nucleus capability in peacetime were simply not available.

Although a limited amphibious capability was maintained, amphibious forces continued to suffer from neglect until the Suez crisis highlighted a new role for such forces in limited war. Even before the operation at Port Said it had been decided to shift the emphasis away from preparing for large scale operations on the *Overlord* model towards the maintenance of small specialist amphibious forces prepared for raiding and small scale assault. The associated decision to place prime responsibility for amphibious warfare in the hands of the Royal Marines at last gave the Admiralty a stake in amphibious warfare, making it largely a single Service rather than an inter-Service concern. Faced with a declining emphasis on fighting a conventional war in Europe the Admiralty needed to find fresh justification for the maintenance of a large fleet. The limited war and cold war power projection role was embraced as a means of doing just that. The Navy developed the concept of amphibious task forces supported by aircraft carriers operating in support of British interests east of Suez. The beauty of this scheme was that it required a full range of naval capabilities, from minesweepers to strike carriers, therefore offering the Navy a powerful rationale for maintaining a modern, well equipped, multi-purpose fleet. Amphibious capabilities were central to this new strategy and during the early 1960s the obsolescent wartime assault lift was replaced by capable modern ships.

The study of amphibious capabilities suggests that rather than conforming to a particular "*British Way in Warfare*" , Britain's defence policy has been reactive, adapting to new challenges in a manner perceived as appropriate in the light of existing circumstances. In the 1940s and early 1950s amphibious capabilities were maintained as part of a Continental strategy. While the Army supported the case for maintaining amphibious forces, the Royal Navy, with little at stake in those forces, sought to reduce a commitment that diverted scarce funding and limited manpower away from the fleet. Later, when changing strategic reality brought a shift in priorities, the Navy embraced amphibious capabilities as an integral part of a new maritime strategy designed to enable Britain to maintain a world role. This did

not represent a decisive shift towards a traditional *British way in warfare*. It was rather that a greater reliance on nuclear weapons in Europe and a realisation that major war was unlikely, allowed more resources to be devoted to other contingencies.

Amphibious warfare had changed from being an auxiliary function of seapower, something the Navy did on behalf of the Army, to being a core function of the fleet. In 1964 the Royal Navy was primarily geared towards operations east of Suez with the Navy's capital ships, the aircraft carriers, justified in terms of their use in support of amphibious assaults. The main reason for this change was that while in the 1940s amphibious capabilities diverted resources away from the fleet, in the 1960s they were an important means of justifying further resources. This is not to say that the Admiralty were not committed to the intervention role east of Suez, rather, that facing the spectre of cuts in forces devoted to global war a new role was sought and that amphibious forces were central to this role. The response of the Admiralty to challenges posed in the 1950s and 1960s is very similar to the approach adopted by the Navy in the 1990s.

In 1964 the Admiralty was planning on the basis that in 1966 an Amphibious Group consisting of three operational amphibious ships would be permanently maintained east of Suez. During operations the Amphibious Group would normally be supported by an aircraft carrier, the necessary escorts, a replenishment group, and the LSLs.<sup>2</sup> The Navy's role in limited war was clearly demonstrated in January 1964 when 45 Commando conducted a helicopter landing from the aircraft carrier HMS *Centaur* in order to put down an army mutiny in newly independent Tanganyika.<sup>3</sup> With construction of the new assault ships already underway, and approval gained for a new aircraft carrier the future of the Navy's intervention capabilities looked assured. The position looked less stable in 1966. Far from approving the construction of a second or even a third aircraft carrier, the Labour administration of Harold Wilson announced the cancellation of the first

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<sup>2</sup>. COS 109/64, 2 April 1964, memo by Admiralty; DEFE 5/150. COS 26mtg/64, 2 April 1964; DEFE 4/167.

<sup>3</sup>. Lt-Col T.M.P.Stevens, "A Joint Operation in Tanganyika", *RUSI Journal*, vol.637, February 1965 p.48-55. ADM 1/29063; *Operations in East Africa*.



carrier, CVA-01, in the 1966 Defence White Paper. The White Paper declared that:

only one type of operations exists for which carriers and carrier borne aircraft would be indispensable; that is the landing or withdrawal of troops against sophisticated opposition outside the range of land-based air cover. It is only realistic that we, unaided by our allies, could not expect to undertake operations of this character in the 1970s.<sup>4</sup>

The government did not believe that a carrier force of three ships would provide “*sufficient operational return for our expenditure*” . Facing the need to cut defence expenditure, the Minister of Defence, Denis Healey, had reversed the decision taken by the previous government in 1963 and decided to rely on the cheaper, but less satisfactory alternative of land based aircraft operating from a string of island bases east of Suez. Even that decision was short-lived as within two years it was announced that Britain would withdraw its military forces from east of Suez, concentrating in future on NATO commitments.

This could have had ominous implications for the new amphibious ships which had been built largely to cater for limited intervention east of Suez. However, unlike CVA-01, the ships had already been built and represented a significant investment of capital. The amphibious ships and the Commandos found a new role within NATO, once again being directed towards major war contingencies. Troops that had previously been dedicated to limited war operations in the Indian Ocean found themselves rapidly switched to the role of Arctic warfare in support of NATO’s northern flank. Far from being neglected and allowed to fall into disrepair as had happened in the late 1940s and early 1950s, amphibious capabilities continued to be an important part of the modern Royal Navy. The assault ships were retained as were two commando carriers. HMS *Hermes* was converted to this role in 1973 to replace *Albion* which was withdrawn from service in 1976. HMS *Bulwark* was eventually paid off in 1976 and *Hermes* abandoned the commando carrier role and was re-equipped as an ASW carrier. In 1979 *Bulwark* was reactivated after a refit to operate as an

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<sup>4</sup>. Statement on the Defence Estimates 1966; Cmnd 2901.

ASW carrier in the time between the decommissioning of the last conventional aircraft carrier, HMS *Ark Royal* , and the arrival of the new *Invincible* class VSTOL carriers. *Bulwark* returned to Portsmouth dockyard to be taken out of service in March 1981.<sup>5</sup> This was unfortunate as only thirteen months later this old amphibious veteran could have provided a useful third deck in Operation *Corporate*, the battle for the Falkland Islands.

The 1982 Falklands War provides some useful insights into the debates about amphibious capabilities in the 1960s. The amphibious ships employed for Operation *Corporate* were all built as a result of decisions taken during the early 1960s and operations in 1982 allowed them to prove their worth in testing circumstances. The core of the amphibious fleet was provided by the assault ships HMS *Fearless* and *Intrepid* . These were supported by the RFA operated LSLs and by a large number of Ships Taken Up From Trade (STUFT). Together these ships carried an initial landing force consisting of 3 Commando Brigade, reinforced with the 2nd and 3rd Battalions of the Parachute Regiment, and successfully landed them in an unopposed assault at San Carlos on 21 May. This would not have been possible without the specialist assault ships. The landing craft carried by these ships played a vital role in unloading troops and equipment not only from the amphibious ships but also from the STUFT. Following the initial landing the amphibious ships provided the land force with tactical mobility; landing troops at Teal Inlet, Fitzroy and Bluff Cove helping to mitigate the loss of heavy lift helicopters which were sunk with the *Atlantic Conveyor* on 25 May.<sup>6</sup>

The performance of the two VSTOL carriers employed for *Corporate* , HMS *Hermes* and *Invincible* , sheds some light on the 1960s debate over the replacement of aircraft carriers. These relatively small ships, carrying a maximum of only 25 Sea Harriers between them, were able to provide enough air cover to allow the landings to take place and for the successful prosecution of the land campaign. The Harriers were, however, unable to achieve total air superiority and, hampered by the

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<sup>5</sup>. Burns + Critchley, *HMS Bulwark*, p.100-105.

<sup>6</sup>. Julian Thompson, *No Picnic. 3 Commando Brigade in the South Atlantic 1982*, (London: Leo Cooper, 1992) p.59 + passim. David Brown, *The Royal Navy and the Falklands War*, (London: Arrow Books Ltd, 1989) passim.

lack of airborne early warning aircraft, they were unable to stop the Argentine Air Force from inflicting significant casualties on the task force. The amphibious assault had to be conducted at a time when air control was disputed. Julian Thompson estimated that it was not until 26 May, five days after the initial landing, that the enemy air force was subjected to such attrition that it no longer posed a threat to land operations and as late as 8 June the Argentinian Air Force was able to launch successful attacks against two LSLs in Bluff Cove and the frigate, HMS *Plymouth*, in San Carlos Water.<sup>7</sup>

The campaign showed that small aircraft carriers operating VSTOL/STOVL fighters could provide a significant air defence and ground attack capability, although not to the level offered by a large strike carrier. Admiralty reluctance during the 1960s to consider a ship smaller than 50,000 tons contributed to the great cost of the carrier replacement programme and thus ultimately to its cancellation. HMS *Invincible* proved that a ship of only 20,000 tons could offer a significant and versatile STOVL capability. However, it is fortunate that the 28,700 ton HMS *Hermes* had not yet been replaced by an *Invincible* class ship. The old carrier embarked twice as many Harrier jets as was possible in the new ship, significantly boosting the task force's air defence capability.<sup>8</sup> A 50,000 ton carrier such as CVA-01 would have been able to employ larger, heavier aircraft in greater numbers than the existing ships, and by providing the fleet with an airborne early warning capability it would have offered the task force greatly improved air defence. In the event the Navy was forced to rely on its anti-aircraft missiles to make up for the inadequacy of the fighter cover. In the 1960s the Admiralty had claimed that by giving up the fixed wing capability and relying on missiles they would be abandoning a field in which Britain enjoyed considerable expertise for one in which she was a newcomer, and in which potential enemies had years of experience.<sup>9</sup> The loss of missile armed ships to enemy air attack during the Falklands conflict would seem to validate this opinion or at least to demonstrate the limits of contemporary missile technology.

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<sup>7</sup>. Thompson, *No Picnic*, p.61.

<sup>8</sup>. *Hermes* embarked a maximum of 15 Sea Harriers and 6 RAF GR3 Harriers. *Invincible* carried a total of 10 Sea Harriers.

<sup>9</sup>. See chapter eight., page 246

The Falklands experience demonstrated the strength of the Admiralty's concept of amphibious task groups supported by aircraft carriers operating in limited war. It was precisely such a task group which retook the Falkland Islands, although with weaker air assets than anticipated in 1964. In comparison the Air Ministry's Island Stance does not look so good. The presence of even large numbers of TSR.2 strike and reconnaissance aircraft at fixed bases would have done little to deter Argentine aggression as these aircraft would have been powerless to intervene in the South Atlantic. The nearest friendly airfield to the Falklands was on Ascension Island, almost 4000 miles from Port Stanley and well beyond the effective operating range of strike aircraft. The RAF did manage to launch a small number of strikes against Port Stanley airfield from Ascension but these had minimal impact on the course of the war. On 1 and 4 May a solitary Vulcan bomber, supported by no less than eleven tanker aircraft undertook a 7,860 mile round trip in order to conduct a high level bombing attack on the airfield.<sup>10</sup> The attacks were ineffective, failing to close or seriously damage the airfield. Later in the war a Vulcan conducted two SHRIKE anti-radar attacks on Port Stanley. These were also ineffective and after the second attack the Vulcan was forced to fly to Brazil due to a technical fault and therefore could not undertake further operations.<sup>11</sup>

An important part of the Island Stance argument had been the claim that enemy air activity could be controlled by long range strikes against their airfields and operating bases. The Admiralty had questioned the willingness of any government to sanction pre-emptive strikes during any limited operation and this was borne out by experience in 1982. No attacks were launched against airfields on the Argentinian mainland and any attempt to do so would have represented a significant escalation of the conflict. Close fighter cover was vital to the success of the operation and could only be provided from the deck of an aircraft carrier. A makeshift airstrip was established ashore by 5 June, 16 days after the initial landing. Although useful as an auxiliary airfield, lengthening the range of combat air patrol and increasing the readiness

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<sup>10</sup>. Commander Ward, *Sea Harrier over the Falklands*, (London: Orion Books, 1995) p.186.

<sup>11</sup>. Brown, *Falklands War*, p.258-259 + 277.

for ground support missions, it was not really an independent airfield capable of sustained operations.<sup>12</sup> In the event it was possible to conduct a brigade level amphibious assault without total air superiority, and to support the land force in its subsequent operations ashore. However, the Navy paid a heavy price in lives lost and ships sunk. If the Argentine Air Force had concentrated on attacking the amphibious ships rather than their escorts, or had they succeeded in sinking one of the carriers the result might have been much less satisfactory.

Amphibious warfare remains an important part of the Royal Navy in the 1990s. Decisions taken in the 1960s still largely determine the shape and size of Britain's amphibious capability. The core of the amphibious fleet are the two old assault ships and the LSLs. In addition to these, the three *Invincible* class aircraft carriers can be used to carry units of an amphibious force for operations of limited duration, landing the embarked troops by helicopter. These carriers also provide any amphibious task force with indigenous air power.<sup>13</sup> The Royal Marines maintain a Commando Brigade of three Commandos, and these troops still provide Britain's amphibious spearhead. The launch in 1995 of a new helicopter assault ship, HMS *Ocean*, and the declared intention to replace the two assault ships with new construction is a clear indication of the Navy's continued interest in amphibious warfare.<sup>14</sup>

Following the collapse of the Soviet Union, Britain faces a reduced threat of a major conventional war in Europe. The inevitable calls for a "peace dividend" have brought sharp reductions in the strength of all three Services. In this environment the Navy has again sought to emphasise the power projection role as a means of justifying its share of the budget. Once again amphibious forces are central to this strategy. In 1995 *The Fundamentals of British Maritime Doctrine* was published. The first ever public statement of maritime doctrine, it was approved by the Navy Board and represents an attempt by the Navy to outline their role in the post-cold war environment. The new doctrine highlights the fact that while there is a reduced threat of a major war in

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<sup>12</sup>. The loss of the merchant ship *Atlantic Conveyor*, with much special equipment embarked, delayed the construction of the airstrip.

<sup>13</sup>. *The Fundamentals of British Maritime Doctrine*, BR1806, (London: HMSO, 1995)

<sup>14</sup>. *Statement on the Defence Estimates 1995: Stable Forces in a Strong Britain*; Cm 2800.

Europe there is a growing potential for more limited conflicts elsewhere. It claims that in order to face the challenge to British and Western interests posed in this new environment, Britain needs to maintain global reach and the ability to project power. Amphibious capabilities are identified as one of the means of projecting power overseas.<sup>15</sup>

The Navy's response to the challenges of the post-cold war world in the 1990s is very reminiscent of the response to similar challenges in the late 1950s. Much of what is written in the Maritime Doctrine of 1995 could easily have been taken from an Admiralty document completed almost forty years earlier. It would seem that when the Navy's main role in defence of the Atlantic sea lanes is threatened by a change in priorities, then the Navy exploits the flexibility of amphibious seapower and adopts the role of overseas power projection. In this way amphibious warfare remains one of the core capabilities of the fleet.

The extent to which the Services will go to defend their share of the budget is clearly demonstrated by the fate of amphibious warfare during the period 1945-1964. In the first decade after the war the Admiralty jealously protected its budget from unnecessary spending on peripheral tasks such as amphibious operations. However, once naval interest in amphibious capabilities was aroused, and plans were made to develop these capabilities, opposition from both the Army and the RAF was encountered. Army fears that the Royal Marines were expanding at their expense brought about a deal where the Admiralty agreed to set the level of the Commandos artificially low in order to secure War office approval for their plans.<sup>16</sup> RAF opposition was more entrenched. Facing the spectre of severe cuts in land based airpower the Air Ministry fought a hard and bitter campaign against Navy plans for amphibious task forces supported by modern strike carriers east of Suez. The Navy were equally determined to defend what they considered to be an important capability. With both the Navy and the RAF seeking approval of expensive new equipment programmes some conflict was unavoidable. It was an unfortunate fact of life that defence

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<sup>15</sup>. **British Maritime Doctrine.**

<sup>16</sup>. See chapter eight, page 226-228.

policy could be governed more by the inter-play of competing interests in Whitehall than by any rational long term planning process. In the current climate of defence cuts and retrenchment it is perhaps inevitable that similar conflicts of interests may arise today.

The history of amphibious warfare in Britain during the period studied shows that the fate of any capability is determined by the level of priority accorded to it by the parent Service. A serious, modern amphibious capability would have proven no less useful to Britain in the 1940s and 1950s than it did in the 1960s. Such a capability would have allowed Britain to make a contribution to American operations in Korea, including the Inchon landing. It would have offered Britain military options during the Abadan crisis of 1951 and could have transformed the outcome of the Suez crisis. However, during this period the Admiralty was primarily concerned with the problems of maintaining sea control in a war against the Soviet Union, and neither COHQ/AWHQ nor the Army were able to force them to devote much priority to amphibious capabilities. It was probably inevitable that with one Service (the Navy) expected to provide equipment largely for use by another Service (the Army) to the detriment of their own programmes little was achieved. Once the Royal Navy had a stake in amphibious capabilities the situation was transformed. These capabilities now served the interests of their parent organisation as well as the national interest, the result was the creation of the modern effective amphibious warfare ships which even today provide the backbone of Britain's amphibious assault capability.

## **APPENDIX ONE: AMPHIBIOUS SHIPS AND CRAFT**

### **SHIPS**

ADCS	Air Defence Control Ship
AKA	Attack Cargo Ship (later LKA)
APA	Attack Transport (later LPA)
APD	High Speed Transport (later LPR)
ATD	Amphibious Transport Dock
CVHA	Assault Helicopter Carrier (later LPH)
LPD	Amphibious Transport Dock
LPH	Assault Helicopter Carrier
LSC	Landing Ship, Carrier
LSD	Landing Ship, Dock
LSE(LC)	Landing Ship, Emergency Repair (Landing Craft)
LSE(LS)	Landing Ship, Emergency Repair (Landing Ship)
LSF	Landing Ship, Fighter Direction
LSG	Landing Ship, Gantry
LSH	Landing Ship, Headquarters
LSH(C)	Landing Ship, Headquarters (Command)
LSI	Landing Ship, Infantry
LSI(H)	Landing Ship, Infantry (Hand Hoist)
LSL	Landing Ship Logistic
LSM	Landing Ship, Medium
LSM(R)	Landing Ship, Medium (Rocket)
LSP	Landing Ship, Personnel
LSS	Landing Ship, Stern-chute
LSS(R)	Landing Ship, Support (Rocket)
LST	Landing Ship, Tank
LST(A)	Landing Ship, Tank (Assault)
LST(C)	Landing Ship, Tank (Carrier)
LST(D)	Landing Ship, Tank (Dock)
LST(Q)	administrative support ship
LSU	Landing Ship, Utility
LSV	Landing Ship, Vehicle
MS (LC)	Maintenance Ship (Landing Craft)
MS (LS)	Maintenance Ship (Landing Ship)
M/T Ship	Motor Transport Ship
W/T Ship	Wireless Tender

### **BARGES, CRAFT AND AMPHIBIANS**

DD	Duplex Drive
DUKW	amphibious truck
LBE	Landing Barge, Emergency Repair
LBF	Landing Barge, Flak
LBK	Landing Barge, Kitchen



## **Appendix One: continued**

LBV	Landing Barge, Vehicle
LBW	Landing Barge, Water
LCA	Landing Craft, Assault
LCA(HR)	Landing Craft, Assault (Hedgerow)
LCA(OC)	Landing Craft, Assault (Obstacle Clearing)
LCC	Landing Craft, Control
LCE	Landing Craft, Emergency Repair
LCF	Landing Craft, Flak
LCG	Landing Craft, Gun
LCH	Landing Craft, Headquarters
LCI	Landing Craft, Infantry
LCI(G)	Landing Craft, Infantry (Gunboat)
LCM	Landing Craft, Mechanised
LCN	Landing Craft, Navigation
LCP	Landing Craft, Personnel
LCP(R)	Landing Craft, Personnel (Ramped)
LCP(SY)	Landing Craft, Personnel (Survey)
LCP(U)	Landing Craft, Personnel (Utility)
LCQ	administrative support craft
LCR	Landing Craft, Raiding
LCS	Landing Craft, Support
LCS(R)	Landing Craft, Support (Rocket)
LCT	Landing Craft, Tank
LCT(E)	Landing Craft, Tank (Emergency Repair)
LCT(R)	Landing Craft, Tank (Rocket)
LCU	Landing Craft, Utility
LCV	Landing Craft, Vehicle
LCVP	Landing Craft, Vehicle and Personnel
LVT	Landing Vehicle, Tracked
LVT(A)	Landing Vehicle, Tracked (Armoured)
ML	Motor Launch
MLC	Motor Landing Craft
NLVT(X)	Naval Landing Vehicle Tracked (Experimental)

The designation (S), (M) and (L) following the name of the ship or craft means small, medium or large respectively. For example, LSI(M) is a Landing Ship. Infantry (Medium) while LCG(L) is a Landing Craft, Gun (Large). The number following the name of the ship or craft indicates the particular version of the vessel. For example, an LCT(8) is a Landing Craft Tank, mark eight.

For ease of reference standard American nomenclature has been used for landing craft throughout this work. This system was not adopted by the British until 1942. Prior to this; LCT were known as Tank Landing Craft, LCM were called Mechanised Landing Craft, and LCA were Assault Landing Craft. In the Mediterranean theatre they were known as A Lighters, B Lighters and C Lighters respectively.

## **APPENDIX TWO: ABBREVIATIONS**

1SL	First Sea Lord
ACO	Adviser on Combined Operations
AEW	Airborne Early Warning
AFME	Air Forces, Middle East
AOC	Air Officer Commanding
AOTC	Amphibious Operations Training Centre
ASW	Anti-Submarine Warfare
ATF	Assault Training Force
AWC	Amphibious Warfare Centre
AWHQ	Amphibious Warfare Headquarters
AW Squadron	Amphibious Warfare Squadron
AWSS	Amphibious Warfare Signal School
AWXE	Amphibious Warfare Experimental Establishment
BAOR	British Army of the Rhine
BFAP	British Forces, Arabian Peninsula
BJSM	British Joint Services Mission
CAS	Chief of the Air Staff
CAW	Chief of Amphibious Warfare
CCO	Commodore, Combined Operations (December 1941 to March 1942)
CCO	Chief of Combined Operations (from March 1942)
CCOR	Chief of Combined Operations Representative at BJSM
CDS	Chief of the Defence Staff
CGRM	Commandant General, Royal Marines
CIGS	Chief of the Imperial General Staff
COCOS	Chief of Combined Operations Staff
CODC	Combined Operations Development Centre
COHQ	Combined Operations Headquarters
COJP	Combined Operations Joint Planner
COLO	Combined Operations Liaison Officer
COS	Chiefs of Staff
COSSAC	Chief of Staff, Supreme Allied Commander
CXD	Co-ordinator of Experiments and Development
COXE	Combined Operations Experimental Establishment
CSA	Chief Scientific Adviser
CTC	Combined Training Centre
CTE	Combined Training Establishment
DCAS	Deputy Chief of the Air Staff
DCIGS	Deputy Chief of the Imperial General Staff
DCO	Director of Combined Operations
DCOM	Director of Combined Operations Material
DCOS(IT)	Deputy Chiefs of Staff, Inter-Services Training Sub-Committee
DNC	Director of Naval Construction
DXSR	Director of Experiments and Staff Requirements

## **Appendix Two: continued**

FOME	Flag Officer, Middle East
GOC	General Officer Commanding
ISTDC	Inter-Services Training and Development Centre
HQEF	Headquarters Expeditionary Force
JFSC	Joint Fire Support Committee
JOC	Joint Operations Centre
JSAWC	Joint Services Amphibious Warfare Centre
JWC	Joint Warfare Committee
JWE	Joint Warfare Establishment
JWS	Joint Warfare Staff
NATO	North Atlantic Treaty Organisation
PAO	Principle Administrative Officers
RAW	Responsibility for Amphibious Warfare
RAC	Royal Armoured Corps
RAF	Royal Air Force
RNVR	Royal Navy Volunteer Reserve
RTR	Royal Tank Regiment
SAR	Search and Rescue
SRC	Shipping Resources Committee
STOL	Short Take Off and Landing
STOVL	Short Take Off and Vertical Landing
USMC	United States Marine Corps
USN	United States Navy
VACTC	Vice Admiral, Combined Training Centre
VCAS	Vice Chief of the Air Staff
VCIGS	Vice Chief of the Imperial General Staff
VCNS	Vice Chief of the Naval Staff
V/STOL	Vertical/Short Take Off and Landing
VTOL	Vertical Take Off and Landing
WD LST	War Department LST

## **APPENDIX THREE**

### **Part One: Military Figures 1945-1964**

#### **First Sea Lord**

1943-1946	Sir Andrew Cunningham (Viscount Cunningham of Hyndhope)
1946-1948	Sir John Cunningham
1948-1951	Bruce, Lord Fraser of North Cape
1951-1955	Sir Rhoderick McGrigor
1955-1959	Louis, Earl Mountbatten of Burma
1959-1960	Sir Charles Lambe
1960-1963	Sir Caspar John
1963-1966	Sir David Luce

#### **Chief of the Air Staff**

1940-1946	Sir Charles Portal
1946-1950	Sir Arthur Tedder
1950-1953	Sir John Slessor
1953-1956	Sir William Dickson
1956-1960	Sir Dermot Boyle
1960-1964	Sir Thomas Pike

#### **Chief of the Imperial General Staff**

1946-1948	Viscount Montgomery
1948-1952	Sir William Slim
1952-1955	Sir John Harding
1955-1958	Sir Gerald Templer
1958-1961	Sir Francis Festing
1961-1965	Sir Richard Hull

#### **Chief of Combined Operations/Amphibious Warfare**

1940	A.G.B. Bourne (Adviser on Combined Operations)
1940-1941	Sir Roger Keyes (Director of Combined Operations)
1941-1943	Louis, Earl Mountbatten of Burma
1943-1947	R.E. Laycock
1947-1950	G.E. Wildman-Lushington
1950-1954	V.D. Thomas
1954-1957	C.F. Phillips
1957-1961	J.L. Moulton
1961-1962	R.D. Houghton

## **APPENDIX THREE**

### **Part Two: Political Figures 1945-1964**

#### **Prime Minister**

1945-1951	Clement Attlee (Labour)
1951-1955	Winston Churchill (Conservative)
1955-1957	Anthony Eden (Conservative)
1957-1963	Harold Macmillan (Conservative)
1963-1964	Alec Douglas-Home (Conservative)

#### **Minister of Defence**

1945-1946	Clement Attlee
1946-1950	A.V. Alexander
1950-1951	Emanuel Shinwell
1951-1952	Winston Churchill
1952-1954	Earl Alexander of Tunis
1954-1955	Harold Macmillan
1955	Selwyn Lloyd
1955-1956	Walter Monckton
1956-1957	Anthony Head
1957-1959	Duncan Sandys
1959-1962	Harold Watkinson
1962-1964	Peter Thorneycroft

#### **First Lord of the Admiralty**

1945-1946	A.V.Alexander
1946-1951	George, Viscount Hall
1951	Francis, Lord Pakenham
1951-1956	James P.L.Thomas, Viscount Cilcennin
1956-1957	Quentin, Viscount Hailsham
1957-1959	George, Earl of Selkirk
1959-1963	Peter, Baron Carrington
1963-1964	George, Earl Jellicoe

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ADM 116	Cases of the Admiralty and the Secretariat.
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ADM 186	Naval Staff Histories.
ADM 202	Royal Marines War Diaries.
ADM 203	Royal Naval College Correspondence and Papers.
ADM 205	First Sea Lord: Papers.
ADM 210	Green List, 1942-1946.
ADM 219	Directorate of Naval Operational Studies: Reports.
ADM 234	Navy Reference Books: Books of Reference.
ADM 239	Navy Reference Books: Confidential Books.

##### **Air Ministry**

AIR 8	Chief of Air Staff: Papers.
AIR 20	Unregistered Papers.

##### **Cabinet Office**

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CAB 80	COS Committee Memoranda to December 1946.
CAB 84	Joint Planning Committee.
CAB 128	Cabinet Minutes.
CAB 129	Cabinet Memoranda.
CAB 130	Cabinet Committees.
CAB 131	Cabinet Defence Committee.
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DEFE 6	Joint Planning Committee.
DEFE 7	Register Files: General Series.
DEFE 8	COS Committees and Sub-Committees.
DEFE 11	COS Committee: Registered Files.

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